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Exploring the use of a maternity telephone helpline and the health seeking behaviour of callers'
a case study

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**EXPLORING THE USE OF A MATERNITY TELEPHONE HELPLINE
AND THE HEALTH SEEKING BEHAVIOUR OF CALLERS'**

A CASE STUDY

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ABSTRACT

Background

Telephone helplines have been implemented across the NHS in a drive to enhance service productivity and efficiency. They are a relatively new initiative in maternity care and to date few maternity units have introduced a dedicated helpline for women run by midwives alongside routine service provision. Currently there is a dearth of evidence regarding why women call helplines, whether advice and information offered as a consequence avoids the use of additional health resources or if helplines are viewed positively by healthcare providers.

Aims and objectives

This study aimed to explore the use and impact of a maternity telephone helpline service established in one large London maternity unit from the perspective of women who called the helpline and healthcare staff based in three clinical areas which traditionally received high call volumes. The study also aimed to explore and understand the health or advice seeking behaviour of women who called the helpline.

Study objectives were to identify the reasons for calls, describe the content, impact and outcome of advice on self care offered by the midwife, explore why pregnant and postnatal women sought advice, and explore views of healthcare staff regarding the role of the helpline with respect to impact on their area of care provision.

Research design and methodology

Feminist epistemology influenced the study design framed within the health belief model. A case study design supported use of multiple methods of data collection in line with the epistemological and theoretical framework with three study phases. Phase one was a service evaluation that involved collating routine data using a prospective cohort of 422 women, 50 community midwives and four partners who called the helpline during a one month period. Phase two comprised telephone interviews with a purposive sample of 34 women offered

advice on self management of reported concerns and a purposive sample of women who called the helpline on more than one occasion.

Face to face interviews were conducted during phase three with a purposive sample of 11 healthcare workers to explore their views of the helpline. Analyses included univariate approaches of quantitative data and thematic analyses of qualitative data.

Key findings

Women called the helpline for concerns ranging from individual pregnancy and non-pregnancy related health problems, to requests for information on aspects of routine maternity service provision. Reasons for calls supported constructs of the health belief model. The advice offered appeared to avoid the need for additional health contacts, reassured women and enhanced confidence and self efficacy. The need to revise information systems was highlighted by the extent to which the helpline supported the organisation, when routine systems were not adhered to by staff. The helpline was perceived by health professionals and clerical staff as potentially reducing unscheduled admissions and ‘freeing’ up time to focus on other aspects of clinical care and work practices.

Conclusion

Findings contribute evidence on how a maternity helpline offers support and reassurance for women, building confidence, self-efficacy and potentially reducing need for additional health contacts. Healthcare staff viewed the helpline positively, with the need for services to ensure that strategies for communication and information provision are revised appropriately. Further larger studies are now required to consider outcomes of maternity helplines.

ACKNOWLEDGEMENTS

I would like to thank my supervisors Professor Debra Bick and Dr Jo Fitzpatrick for their expert guidance, advice and support. They have been truly inspirational in their supervision style and approach. I express gratitude and heart felt thanks for their unfailing and steadfast commitment to me completing this study. I also wish to thank my family and friends for their prayers, support, patience and tolerance during this challenging journey. In particular the patience and understanding expressed by my husband has been a humbling experience as his quiet confidence in me to successfully complete this study has maintained my focus and determination.

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CHAPTER 1

RATIONALE AND CONTEXT

1.0 Introduction

In an economic climate where safety and quality are the focus of health care planning and provision (Department of Health (DH) 2008, DH 2010), a predicted increase in the birth rate and a requirement of the NHS as a whole to contribute towards £15 to £20 billion of efficiency savings by the end of 2013/14, presents challenges for all clinical specialties, including the maternity services. In an attempt to understand how maternity services in the UK and more specifically in London, were addressing issues of demand outstripping capacity against the drive for enhanced care quality and efficiency savings, the researcher developed an interest in how the services had responded to meet these challenges. This was particularly focused on the role of maternity telephone helplines which were being established as a response to creating efficiencies to manage service demand within current resources. A potential aim of maternity helplines was to provide advice to pregnant and postnatal women to implement self care at home and prevent unnecessary hospital admissions and use of services including GP or contact with the community midwife. It is this aspect of implementation of a maternity helpline service that is the subject of the study undertaken to inform this thesis.

Further interest in this area of health care provision was informed by evidence from a small number of studies (described in chapter 2) that showed the potential benefits of telephone helplines to the wider National Health Service (NHS), including for example, NHS Direct.

This chapter presents the background and the context to the study presented in this thesis and highlights the current and future capacity and demand challenges faced by maternity services in the UK particularly in London where the study presented was undertaken. The pressure to improve productivity by developing new ways of working and creating new roles is also explored, followed by the presentation of policies that shape maternity care provision and their relevance to the subject of this thesis.

1.1 Background

A predicted increase in the birth rate in London presents several challenges for maternity service providers in the city to maintain safe and high quality standards of maternity care (Royal College of Obstetrics & Gynaecology (RCOG) et al 2007, Health Care Commission (HCC) 2008). One fifth of all births in England take place in London and birth rates in the capital rose from 104,412 births in 2002 to 127,640 in 2008, with a predicted increase of 1.6% across the whole of London between 2012 and 2018 (Greater London Authority (GLA) 2011). London has the highest proportion of young women and women over 40 years of age giving birth in the UK (NHS London 2010). The increasing age of first time mothers, multiple pregnancy, obesity and the number of women with existing co morbidities have increased the demands on maternity care providers (Sandall et al 2007). This is compounded by a predicted growth in the population of London following the development of the Thames Gateway and the regeneration of land for the 2012 London Olympics project. During the past five years the birth rate in London increased by 16% compared to an overall rate of 12.7% in England (NHS London 2010).

Increased clinical activity has presented capacity, demand and workforce challenges for maternity services at a time when health policy and national guidance expect improvement in quality (DH 2004, DH 2007, DH 2008, Darzi 2009) and the introduction of workforce models that put service users first (DH 2010) and offers them choice and a say in their health care (DH 2004, DH 2010). The Nursing and Midwifery Council (NMC) recently raised concerns about insufficient numbers of midwives to meet required maternity standards generally (NHS London 2011), an issue likely to be of greater importance in the capital with 17.5% of the midwifery workforce in London currently eligible to retire and approximately 53% of this group eligible to retire during the next 15 years (Royal College of Midwives (RCM) 2008). The RCM and the RCOG have also raised concerns regarding clinical staff shortages in the maternity services and emphasized the need to increase staffing levels. This includes the recommendation for 60-98 hour obstetric consultant presence on labour wards depending on the number of births (RCOG 2007) and one-to-one midwife care for women in labour (DH 2007). However a report published by the Kings Fund suggests that although staff numbers are important, “the key to improving services is to ensure that there is effective deployment of the right staff doing the right thing at the right time, in the right place” (The King’s Fund 2008, p 48).

In an effort to address these concerns, in a health care climate where financial pressures suggest that it is unrealistic to expect significant increases in staff numbers, provider units have responded in a number of ways. For example, the introduction of neonatal nurse practitioners in some maternity units enables tasks previously undertaken by midwives, such as transitional care for babies, to be undertaken by nurses, thereby releasing midwifery time to focus on midwifery related practice (Redshaw et al 2000). Other maternity units employ band⁵ theatre nurses to manage and lead obstetric theatres, scrub for caesarean section cases and work in maternity high dependency units (LSA 2010). Whilst there is no published evidence regarding the impact of these roles on maternity service outcomes (Sandall et al 2011), employing appropriately trained band 5 nurses instead of band 6 midwives implies that the hospital would be making a cost saving.

To release midwifery time to focus on midwifery practice in maternity services, the maternity support worker (MSW) role was developed. The MSW role was first described in the National Service Framework (NSF) for Children, Young People and Maternity Services (DOH 2004) as a role that would allow an appropriately trained MSW to undertake tasks delegated by a midwife to care for women and their families. This view was further supported by the policy document 'Maternity Matters' (DH 2007). Maternity services in London are committed to supporting the education of maternity support workers with the knowledge and skills to undertake non midwifery tasks for example, data entry and the organization and administration of postnatal clinics, releasing midwives to undertake other roles that require their expertise (Griffin et al 2009). Evaluation of the MSW role shows that they are supporting midwives and doctors to improve service delivery (NHS Employers 2006) however, there is limited evidence regarding the efficiencies that these roles create (Griffin et al 2010) and is an area that is currently being evaluated.

1 'Band' refers to nationally agreed pay scales which were the outcome of the 'Agenda for Change' policy document which linked pay scales to the roles and responsibilities of nurses, midwives and allied health professionals in the NHS (NHS careers 2011).

The introduction of postnatal community based clinics by some NHS Trusts where women and their babies are invited to attend for their routine postnatal care, rather than receive home visits by a community midwife, is another service change that has been implemented to enhance productivity and efficiency (Lewis 2009) although this is also in the absence of empirical evidence of benefit. It is postulated that postnatal clinics create workforce efficiencies by reducing the need for low risk postnatal women to be visited at home by a community midwife. This has the potential to release midwives to support more postnatal women in the postnatal clinic because of a reduction in travelling time. Frequently MSWs assist midwives at these clinics, for example by supporting women who may have practical queries with aspects of infant care. This reduces the contact time between the woman and the midwife, again releasing midwifery time. However, without formal evaluation of the safety and efficiency of postnatal clinics, or of women's views to assess if they find this model of care appropriate for their individual needs, the impact of this service is difficult to elicit.

Introducing triage services was considered to be a further way of creating efficiencies within maternity services (Molloy & Mitchell 2010). A model well established in the nursing field, particularly in emergency medicine, triage services aim to prioritise a person's need for care on arrival to an acute environment based on the clinical decision making and judgment of a health care provider (Gerdtz and Bucknall 2001). Applying this to maternity care would ensure that women are seen in the right place at the right time by an appropriately trained professional; an approach deemed to improve productivity (King's Fund 2008) and a model of care adopted by most maternity units in London (NHS London 2010).

The maternity telephone helpline is another service implemented in some maternity units to increase productivity and efficiency. This provides women booked for maternity care at the maternity unit with direct access to a midwife, from whom they can obtain relevant information and advice about their pregnancy or post-birth care (Appleby 2006, Team Hackney et al 2008). The telephone helpline has the potential to empower pregnant and postnatal women where appropriate to take care of their own health concerns which may not require direct midwifery contact, reducing the need for an unscheduled appointment or hospital admission. Empowering patients to take care of their own health at home where appropriate is an approach supported by the new coalition government (DH 2010a) with the potential to save the NHS money without cutting costs (Robinson 2011).

The telephone helpline is however, a relatively new initiative and to date few maternity units have introduced a dedicated helpline available for callers regardless of their stage of pregnancy alongside routine care provision (Team Hackney et al 2008, Appleby 2006). A number of primary research studies have investigated the benefit of introducing a specific telephone service for women who may be in early labour (Spiby 2006, Hunter 2007, Cheyne et al 2007, Kennedy 2007); these are discussed in chapter 2.

Currently there is a dearth of evidence regarding whether the advice offered by a telephone helpline midwife avoids an unscheduled appointment or hospital admission, or if provision of a helpline as part of the routine service provision affects the working practice of members of the healthcare team. Furthermore, the perceptual, cognitive and social factors which may influence why women call a maternity telephone helpline and the impact of advice received have not been explored. It is important to understand and explain these issues (an aim of the current study) to ensure that the most appropriate processes, systems and actions are applied to maximise the potential for health improvement (Conner & Norman 2005).

Despite the introduction of new services and roles to maternity services, capacity and demand remain a challenge for maternity services in London, as evidenced by the frequency of temporary maternity unit closures in London in 2009 for reasons relating to full capacity (NHS London 2010). Telephone helplines have been shown in some studies to reduce demand for healthcare services (Lattimer 1998, IFF research 2008) which is discussed further in chapter two, but the potential for a similar impact on the maternity services was not known. It was for this reason that this study explored the use of a maternity telephone helpline rather than other approaches to address service capacity issues.

1.2 National Context and Policy Influence

In 1997 the then Labour Government announced plans to modernise and rebuild NHS services and introduced plans for a 24 hour telephone advice line (NHS Direct), staffed by nurses ‘to provide people at home with easier and faster advice and information about health, illness, and the NHS, so that they are better able to care for themselves and their families’ (DoH 1997, pg 28). It was also designed to reduce unnecessary demands on other NHS services by directing people for appropriate care with the aim of allowing professionals to focus on patients who needed their skills most.

The past decade has seen the development and expansion of NHS Direct, which was launched in 1998. It was the first 24 hour national nurse led telephone service in the UK.

Since its inception NHS Direct has received an increasing number of calls each year, with eight million calls recorded in 2009 (NHS Direct 2010). More than a decade since its establishment, the impact of NHS Direct on those who use the service and NHS departments shows some success. For example there was a reduction in the use of accident and emergency (A&E) departments which was viewed as a direct consequence of the outcome of calls made to NHS Direct (IFF Research 2008).

The aim of NHS Direct to reduce unnecessary demands on NHS services may however have little impact on maternity services, although evidence to support this is lacking. Currently, if pregnant or postnatal women call the service, the response algorithms direct the caller to the GP, an A&E department or the local midwifery service (NHS Direct 2010). This is because pregnancy advice is deemed to be outside of the nursing scope of practice and competence (Dimond 2003, RCM 2007). Even if call takers are registered midwives, it is unlikely that there would be a sufficient number available to ensure 24 hour availability in all call centres for the numbers of calls made (Spiby et al 2006). As the benefits of NHS Direct are limited for pregnant or postnatal women, this triggered some maternity services to implement local telephone helplines facilitated by midwives.

The NSF for Children, Young People and Maternity Services, Maternity Services Standard 11 (DH 2004) set the benchmark for the maternity services in England to ensure that all women have access to supportive, high quality maternity services, designed around their individual needs and those of their families. Good practice indicators highlighted by the NSF (DH 2004) included the involvement of women in planning their own care, the provision of flexible, accessible services and advice and support from appropriately qualified professionals during the antenatal, intrapartum and postnatal periods. Whilst the maternity telephone helpline service is designed to broaden the options for access to maternity services, the current study will explore accessibility from the user and provider perspective. Advice and support offered will also be explored in terms of whether this met the individual needs of women.

Continuing with the theme of access to maternity services and building on the commitments of the NSF (DH 2004), the policy document 'Maternity Matters' (DH 2007) established four national choice guarantees for pregnant women: choice of how to access maternity care, choice of type of antenatal care, choice of place of birth and the choice of place of postnatal care. The then Labour government guaranteed that by the end of 2009 all women would have these choices.

Research undertaken by the National Childbirth Trust (NCT) examined the extent to which this policy had been implemented. Unspecified geographical areas across the United Kingdom were identified based on the numbers of childbearing women. The average distances to the nearest obstetric unit and birth centre were calculated based on the Birth Choice UK database of maternity units (Gibson and Dodwell 2009), to establish if they had choice of access to home birth, midwifery led and obstetric led services.

The results showed that despite recent policy recommendations, only 4.2% of women in 2008 had access to choice of place of birth (NCT 2009). Whilst this was disappointingly low, it had improved since 2001 when access to choice of place of birth was reported to be 1.1%, a fourfold increase. Some caution should be applied to the study findings as women were not asked if they had a choice regarding place of birth, but a proxy measure of access was used to determine this (NCT 2009). The reason for this approach was not described, but the proxy measure involved combining collated national data regarding home births to determine how many women had reasonable access and what choices they could have had if offered midwifery or obstetric led unit care. Thresholds of care provision which represented what was perceived to be reasonable choice by the NCT included "a local home birth rate of 5% or more and access to maternity units within an estimated 30 minute journey" (NCT 2009 pg 12). The Care Quality Commission (CQC) which regulates, inspects and reviews all health and adult social care services in the public, private and voluntary sectors in England, identified to the DH that maternity units are challenged to meet this choice guarantee, with one of the main reasons being staff shortages (DH 2009).

Another more recent policy that aims to improve the quality of care and productivity in the NHS is the NHS Constitution (DH 2010a). All health care providers in England now have a legal obligation to adhere to the principles of the NHS constitution. Seeking to improve the experiences of those who use the NHS, the constitution outlines the principles and values for the NHS in England including ensuring that patients are at the centre of health care provision

and can make choices about where and how they access health care. It emphasises the responsibilities of care providers to ensure improvement in services and develop innovations that improve care provision.

The NHS White Paper (DH 2010b) upholds the NHS constitution and continues the focus of placing patients at the heart of healthcare and also alludes to patients having greater choice, control and easy access to information they need. Specific reference is made to extending choice for pregnant women by ensuring that they are integral to all decisions made about their care delivery. Maternity care providers have a responsibility to ensure that maternity services adhere to the principles of the constitution.

1.3 Summary

With the rising birth rate particularly impacting on NHS maternity services in London and capacity challenges that influence the temporary closure of maternity units and the increasing number of midwives eligible to retire over the next 15 years, changes need to be made to the way maternity services are organized and provided. Maternity care providers have implemented a range of changes to workforce with the intention of creating efficient working practices within existing funded staffing establishments, whilst meeting cost improvement targets. These changes have predominantly been made in the absence of evidence of benefit or plans for evaluation (Sandall et al 2011). This may be reflective of the pace of change required to meet increasing healthcare demands with finite resources. It is nevertheless important to implement services that are evidence based with planned evaluation to ensure that the safety and quality of care provision remains high and practice is evidence based. Maternity telephone helplines have been introduced with limited empirical evidence regarding their impact and benefit. In contrast a plethora of evidence regarding the use and impact of telephone helplines for the general public is available.

The study described in this thesis explores the reasons for calls made by women to a maternity telephone helpline implemented in one London unit, describes the type of self care advice offered to women who called the helpline and the impact and outcome of this advice, explores why women sought advice and identifies the views of staff regarding the role of the helpline in areas of care provision that traditionally received a high number of calls from women who booked for their maternity care at the study site.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Chapter one outlined some of the challenges of providing maternity care in the current health care climate where maternity services in the England and particularly in London, are facing a rising birth rate and dealing with the increasingly complex health needs of women who become pregnant, whilst contributing to efficiency savings (DH 2010, NHSL 2011). To support the management of user demand for health advice, telephone helplines have been introduced nationally to enable individuals to participate in their care with the aim of reducing demand for healthcare provision from GP, A&E and other hospital services (Lattimer 2005).

The largest consumer telephone service in the United Kingdom (UK) for health care advice and support is offered by NHS Direct, a service maintained predominantly by registered adult, child, mental health nurses and health visitors. Calls made to NHS Direct are initially taken by non clinical staff trained to record the demographic profile of the caller and triage the call by using decision making algorithms (NHS Direct 2007). There are no networked call centres in the UK specifically for use by pregnant or newly delivered mothers, although some units offer a local service for women who are booked to receive care. One of these services is the focus of the research presented in this thesis.

This chapter presents a review of the evidence from general population studies and studies undertaken within the maternity services regarding the process, impact and outcome of telephone helplines from a service user and health service workers' perspective. The evidence reviewed explores the support, satisfaction, self care and resources required to run and maintain helpline services. Evidence regarding these areas is of particular interest to the current study as it is unclear if telephone helplines serve to delay rather than prevent a visit to for example, the A&E department, GP or the maternity unit, or avoid unscheduled appointments.

The search strategy developed to inform the literature review is presented in section 2.1, followed by the presentation and critique of evidence regarding national telephone helplines, locally run telephone helplines by specialist nurses and telephone helplines designed for pregnant and postnatal women. This is followed by a discussion of self care and the importance of establishing its use to help manage patient demand for help and advice.

2.1 Search strategy

A search strategy was developed with guidance from a library information subject specialist to support the identification of relevant studies. Once this was developed, searches of electronic bibliographic databases were conducted for relevant national and international studies published between 1998 and 2011 inclusively. Searching for studies published over the last 13 years ensured that the search results were current and relevant to a climate where rapid health care changes have taken place (Mannion et al 2005, DH 2010), including the launch of NHS Direct in 1998. The search was undertaken in April 2008 and updated in January 2011 using the same search strategy presented in figure 2.1 ensuring that more recently published relevant studies were identified.

Broadening the search to include general population studies captured evidence that provided insight into the use of telephone helplines from a multidisciplinary perspective. Key words and phrases searched included; ‘effectiveness of telephone helplines’, ‘nurse led helpline’, ‘midwife led helpline’, evaluation of midwife led helpline, ‘evaluation of NHS Direct’, ‘self care’ ‘triage’ and ‘telemedicine’. The breakdown of search results relating to key word/phrases were as follows,

- effectiveness of telephone helplines’, 102 articles
- nurse led helplines’, 250 articles
- ‘evaluation midwifery led helpline’, 6 articles
- ‘evaluation of NHS Direct’, 127 articles
- ‘NHS Direct’, 130 articles
- ‘ ‘self care’ 6 articles

- ‘triage’, 1,400 articles
- ‘telemedicine, 1,370 articles

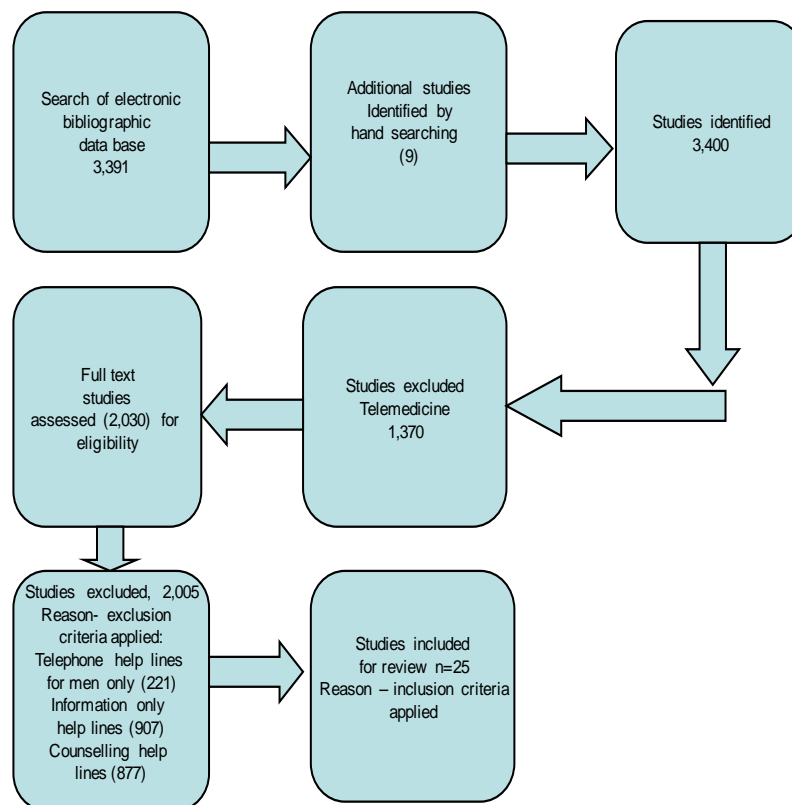
Six electronic bibliographic databases relevant to health service delivery and organisations using telephone helplines were searched, namely, Medline, CINAHL, Embase, Educational Research, Psychological Information and the Cochrane Library. An electronic search was also undertaken of library holdings to identify relevant text books by adding books as a search option. Hand searching of retrieved books and relevant unpublished work was undertaken to identify studies which may not have been identified when undertaking electronic searches (9). Searching within all databases using the key words/phrase in the title, abstract or text and hand searching initially resulted in 3400 studies identified that were potentially relevant.

‘Telemedicine’ was used as a key word to broaden the search and capture any studies that referred to a telephone helpline service (1,370). Applying limitations to the search included the use of a Boolean search option with ‘and’ added to the term which was searched as, ‘telemedicine and helpline’, ‘telemedicine and nurse’ and ‘telemedicine and midwife’. Despite this revision to the search terms, no further studies were identified. To ensure that the telemedicine studies were relevant to the current study, the first six articles identified from the search were read in full (Lovell et al 2006, Clark et al 2007, Willoughby 2009, Properly 2009, Roots et al 2011, Abu-Keel 2010). This process concluded with the exclusion of the telemedicine studies for the following reasons;

- Telemedicine provides specific care related to a health condition known to the call taker with the aim of providing additional support for appropriately managing conditions in the home (Willoughby 2009)
- Care can be monitored using technology over the telephone for known patients, for example, remote monitoring programmes to reduce the rates of admission to hospital for chronic heart failure (Clark et al 2007)
- Telemedicine may be used for counselling callers known to the call taker for a specific psychological problem for example cognitive behaviour therapy (Lovell et al 2006)

Search results were therefore reduced to 2,030 studies. Further limitations were applied to the search results including inclusion and exclusion criteria presented in figure 2.1. These criteria were developed to ensure that the search identified evidence that was relevant to the subject of this thesis. This process resulted in 25 studies being retained for review (figure 2.1).

Figure 2.1 Search strategy flow diagram



2.2 Search results

This section presents an overview of the 25 papers selected and included for review, including a description of the studies, sampling, methods and study results.

2.2.1 Description of studies

Of the 25 studies (appendix 1) there was: one randomized control trial (Lattimer et al 1998); one control trial without randomization (Monaghan 2003); nine surveys (O’Cathain et al 2000, Bodenheiner 2002, Gaines 2002, Tsay 2002, Hughes 2003, Collette et al 2006, NHS Direct 2008, The Proprietary Association of Great Britain (PAGB) 2009, Snooks et al 2009); five observational studies (Munro et al 2000, Chapman et al 2002, Lattimer et al 2005, Birdsall et al 2008, Gischler et al 2008); four evaluation studies (Appleby 2006, Spiby et al 2006, Stewart et al 2006, Team Hackney et al 2008); one case study (Cheyne et al 2007) and two audit reports (Kennedy 2007, Cherry et al 2009). All but two studies (Lattimer et al 1998, Monaghan 2003) used sampling methods that were either purposive or convenience.

Two studies examined the safety of advice and the effectiveness of nurse telephone consultations by investigating adverse incidents (Lattimer et al 1998) and the appropriateness of advice given by helpline nurses (Monaghan 2003). In addition, Monaghan (2003) examined differences in the outcomes of calls handled by specialist nurses and general nurses. Three studies examined the impact of NHS Direct on other NHS services (Munro et al 2000, Lattimer et al 2005, IFF Research 2008). Two studies explored callers’ views regarding a helpline service (O’Cathain et al 2000, Collette et al 2006) and a further study explored callers’ views and the impact of the service on the health professionals’ workload (Spiby et al 2006). The extent to which studies presented information on the follow up of callers to assess the impact of the advice offered by the helpline varied. In the main, studies presented results limited to callers’ initial experience of use of the helpline (O’Cathain et al 2000, Collette et al 2006, Spiby 2006). However, three studies (Stewart et al 2006, Snooks et al 2009, IFF Research 2008) examined the outcome of calls to a helpline to assess if the advice offered as part of the call was adhered to by the individual caller.

Four studies evaluated the introduction of helplines run by specialist nurses that aimed to provide safe and supportive advice and guidance and reduce hospital admission, attendance at A&E, or a visit to the GP (Hughes 2003, Collette et al 2006, Birdsall et al 2008, Gischler et al 2008).

Six studies were identified which addressed the use of a telephone helpline established within a maternity service all of which were managed by midwives. Two of these evaluated

maternity telephone helplines available for women at any time during their pregnancy, labour and the postnatal periods (Appleby 2006, Team Hackney et al 2008).

Two other studies (Spiby et al 2006, Cheyne et al 2007) explored the use of a maternity telephone helpline service specifically for supporting women in early labour. A further two studies were similar in their approach and reported audit findings of maternity telephone triage helplines designed for women who sought advice in early labour (Kennedy 2007, Cherry et al 2009). Six studies (Bodenheiner 2002, Gaines 2002, Tsay 2002, Linnell 2005, Glasgow 2007, PAGB 2009) explored the efficacy of self care.

Twenty two of the 25 studies were undertaken in England, with one study undertaken in Wales (Snooks et al 2009), one in the Netherlands (Gischler et al 2008) and one in Scotland (Cheyne et al 2007). Nurses were employed to facilitate telephone consultations from callers to an NHS Direct call centre in several studies (Munro et al 2000, O’Cathain et al 2000, Monaghan et al 2003, Lattimer 2005, Stewart et al 2006, Snooks et al 2009, IFF Research 2008).

The healthcare environment and setting where helplines were located varied, for example, Lattimer et al (2008) explored telephone service provision in a primary care setting. Studies undertaken by Hughes (2003), Collette et al (2006) and Birdsall et al (2008), Team Hackney et al (2008), Appleby (2006), Kennedy (2007) and Cherry et al (2009), investigated helplines located within an acute hospital setting. The remainder of studies investigated the use of helplines that were located with NHS Direct call centres.

2.2.2 Methodological quality

This section presents an overview of the methodological quality of the included studies.

The aims and objectives of most of the studies selected appear to have been achieved, however this was not apparent in four studies (Hughes 2003, Lattimer et al 2005, Appleby 2006, Team Hackney et al 2008). Lattimer et al (2005) undertook a study to evaluate the diversion of out of hours calls from GP out of hours services to NHS Direct but as the researchers did not define the outcome measure(s) used to determine success it was difficult to establish if the aims and objectives were achieved. Similarly Hughes (2003) examined the nature and outcome of calls and the satisfaction of users who called a helpline designed for rheumatology patients. How satisfaction was measured was not described and it is unclear if

the study objectives were met. Two studies did not describe their study objectives (Appleby 2006, Team Hackney et al 2008).

Limitations identified in four studies (Hughes 2003, Spiby et al 2006, Cheyne et al 2007, Collette et al 2008) included the study sample size which implies that the study results may not be generalized beyond the study population. Where sampling approaches were described, all but two studies used purposive or convenience sampling which provide little opportunity to control for any potential bias (Cluett & Bluff 2000). One study (Lattimer et al 1998) used random allocation where call users were allocated into an intervention or control group, a sampling approach that enhances the quality of the study by reducing the chance of bias (Polit & Beck 2008).

Other included studies where methodological weaknesses were identified included those undertaken by O'Cathain et al (2000), Appleby (2006) and Birdsall et al (2008). Appleby (2006) aimed to evaluate a maternity telephone helpline service but the study period, the basis for the study sample size and approaches to analysis were not described. Birdsall et al (2008) aimed to identify the profile of calls to a telephone helpline and the impact of calls on the workload of a diabetic nurse specialist. The measurement instrument selected for use in the study did not sufficiently measure the workload of the diabetic specialist nurse and therefore the study findings that showed a reduction in workload are unreliable. Similarly O'Cathain et al (2000) aimed to establish the views of patients regarding the usefulness of NHS Direct, but the measurement tool appeared not to measure what it was intended to measure to fully achieve the aim of the study. The representativeness of the sample in several studies was affected by a small sample size (Hughes 2003, Cheyne et al 2007, Team Hackney et al 2008) and a low response rate (Collette et al 2006, Spiby et al 2006).

Studies selected for review are now discussed in section 2.3.

2.3 Telephone helplines for general health enquiries

This section discusses the selected studies that investigated the use of telephone helplines used for general health enquiries and focuses on the use of NHS Direct.

In 1998 a telephone service was introduced in three pilot sites in the UK (across the counties of Lancashire, Northumbria and Milton Keynes) to provide health care advice and information to residents in these areas.

Following the success of the pilot sites, the service was expanded in 2000 and made available to all residents in the UK (Commission for Health Improvement 2004). This service is available for the cost of a local call 24 hours a day, seven days a week. In England the service is called 'NHS Direct' and it is a public service. Similar services are provided in Wales; NHS Direct Wales and Scotland; Scotland NHS-24. There is no dedicated service for Northern Ireland, but Northern Ireland residents can call NHS Direct England.

In the same year as the introduction of NHS Direct, Lattimer et al (1998) conducted a randomized controlled trial that aimed to determine the safety and effectiveness of nurse telephone consultations in out of hours primary care by investigating adverse incidents, described as a circumstance that could have or did lead to harm. The study setting was a general practice (GP) cooperative* in Wiltshire, England of 55 GPs in 19 practices with a population of 97,000 patients. The subjects included all patients contacting out of hours services over a one year period, based on 156 matched pairs of days and weekends. One of each matched pair was randomized to receive the intervention. Three outcome measures were used: deaths within seven days of a contact with the out of hours service; emergency hospital admission within 24 hours; and attendance at an A&E department within three days of contact. An unspecified number of experienced nurses were trained to undertake telephone consultations. Data were downloaded from the calls database and analysed using multiple linear regression.

Over 14,000 calls were received over the trial year and nurses managed half of all referrals to the GP service. There was a 69% reduction in telephone advice required by a GP, 38% reduction in patient attendance at primary care centres and a 23% reduction in home visits over the intervention period.

* A GP cooperative refers to a group of GPs who provide out of hours care to other GP practice patients

The results showed that nurse led calls were not associated with an increase in adverse events and the advice offered by the nurses was considered by the researchers to be safe and effective (although this was not defined). A key strength of this study is the research design. Randomizing patients into an intervention or non intervention group ensures that any possible causes are equal (Stolberg 2004). Further strengths are: the large sample size which suggests study findings are likely to be valid and generalisable beyond the local study population. The study did not explore the individual caller's perspective for example, if they were satisfied with the advice they received, which could have influenced the uptake of the service and number of repeat calls, an area that may have benefit from qualitative inquiry and is of interest for the current study. Despite the reduction in GP workload, Lattimer et al (1998) did not explore how the time released was used by GPs, or if it impacted on other areas of their work. This information would be useful in supporting the benefits of implementing a telephone helpline service in maternity services, particularly in a healthcare climate where workforce efficiencies are required (DH 2010).

The large volume of calls managed by nurses employed by NHS Direct since its introduction (NHS Direct 1998, IFF Research 2008), suggests that there should be a reduction in the number of patients attending primary and/or secondary care services because of the potential to advise callers, where appropriate, to care for themselves at home (DH 2011). Munro et al (2000) aimed to quantify the impact of NHS Direct on the use of A&E departments, ambulance calls, and GP cooperative services within NHS Directs' first year. A descriptive observational study was used to explore trends in use of NHS Direct and other immediate care services, including GP services over a 24 month period in different regions of England, namely, Preston and Chorley, Milton Keynes and Northumbria, the first three areas to have access to NHS Direct. At the time of the study in 1998, these areas provided a service to around 1.3 million people.

Nurses employed by NHS Direct used decision support software supported by evidence based algorithms to offer advice to callers and inform decisions to conclude calls. Call logs created by decision support software in use at each site were reviewed and analysed using non parametric tests. A change in trends of visits to primary and secondary care services following the introduction of NHS Direct was used to assess the impact of NHS Direct. Routine data were collated on activity from A&E departments, ambulance services and GP co-operatives the year before and the year after the introduction of NHS Direct.

The results showed that NHS Direct received 68,500 calls over the study period, but this did not reduce the number of calls to emergency departments, ambulance services or GP co-operatives. There were changes in use of the GP co-operatives showing a decrease from 2% a month before the introduction of NHS Direct to 0.8% afterwards, a small and non statistically significant change. The reasons why there was no reduction in calls to emergency departments were not explored and the researchers did not offer any reasons for this. Attribution to specific causes are therefore speculative, but may be associated with the caller's need to seek additional support. The researchers did not comment on the reliability of the data collected the year before and the year after the introduction of NHS Direct but did make reference to the data being of 'uncertain quality'. On this premise, it is difficult to draw logical conclusions regarding the reliability of the study findings, despite the large sample size.

The researchers postulated that over time the number of callers offered self care advice (which was not defined), would increase as the nurses taking the calls became more confident. The researchers acknowledged that NHS Direct was a new service at the time of conducting the study and findings may have differed if the service had been more established. This assertion is supported by the findings of other studies (O'Cathain et al 2000, Chapman et al 2002).

O'Cathain et al (2000) used a postal survey to explore the views of patients regarding the usefulness of NHS Direct targeting a similar population to that described by the earlier study. (Lancashire, Milton Keynes and Northumbria NHS Direct sites (Munro et al 2000), although the two studies were not linked.

During a one week period in September 1998, 350 consecutive callers at each site were sampled providing a total of 1050. Questionnaires were posted within one week of the call with a response rate of 68% (719/1050) after two reminders. Timely follow up of callers, within one week of the call to the helpline is a strength of this study because of the potential to capture the views of patients when the memory of the call was most recent. However, it is unclear how many responses were received after two reminders and the timeframe between the first and second reminders was not described.

Most callers (566, 79%) followed the advice offered by the nurse. Only 31 (4%) callers found the advice unhelpful. When asked to explain why, 11 callers commented that they felt the advice was inadequate, 10 disagreed with the perceived urgency for treatment that their symptoms warranted and 10 offered individual reasons not described by the researchers. Among callers who found the advice helpful, the most frequently stated reason was that it was reassuring. Just under a quarter of callers (176, 24%) were advised to self manage, although a definition of this was not described and follow up regarding the outcome of this advice was not apparent. It is therefore unclear from the study findings if the advice offered resolved the problem and is a potential limitation of the study. However, the study did show that advice offered by NHS Direct nurses was well received by most callers. Further exploration of the outcome of self care advice may have highlighted how this was used, particularly if callers sought additional health care services. The researchers suggested that a further study which included a qualitative component could help to understand individual callers' needs and how they act in response to advice offered.

It could be argued that the existence of NHS Direct simply represents an 'extra step' for people to access services they would have accessed regardless of advice offered. This is a view supported by the findings of a prospective cohort study undertaken by Stewart et al (2006), which examined the outcome of calls made to NHS Direct by parents of children less than 16 years of age. Data on these calls were cross-matched with attendances at a large paediatric A&E department over three consecutive months in one unspecified geographical area. The study explored if advice offered was followed, as well as the appropriateness of hospital referrals advised by NHS Direct, compared with referrals made by GPs and parents who self referred their children to hospital. Appropriateness measures were not defined by the researchers. The total calls which met study inclusion criteria were 3,312.

The results showed that 2,318 (70%) parent callers were advised to take their child to the nearest A&E department, and after acting on this advice, a small number of these parents reported that their children (71, 3%) were admitted. A higher proportion of children referred to A&E by the GP or whose parents referred the child without prior contact with NHS Direct were admitted. The researchers suggested that visual assessment plays an important role in detecting health problems in children regardless of whether the assessor is medically trained. There was non compliance with NHS Direct advice with some parents who were advised on how to manage their child's symptoms at home, actually attending A&E (176, 20%). This finding may suggest that the robustness of algorithms used by nurses to screen for the need for medical review may be questionable in these cases. Research that explores how nurses make decisions and the influences of clinical judgement and intuition when using evidence based algorithms may contribute to further knowledge in this area. The results show that callers tended to use the advice offered by NHS Direct in combination with other factors to inform their decision making, with the advice used as additional information as opposed to a definitive source. Exploring the reasons for non compliance was not an aim of Stewart et al's (2006) study, but understanding this phenomenon may have assisted in supporting the education and training of nurses regarding how call management could be improved.

A strength of the study is the prospective data collection to monitor and track the outcome of each call made during the study period. However a limitation is the absence of what was included as 'measures of appropriateness', which makes it difficult to understand how referrals were assessed by NHS Direct staff compared with referrals by GPs and parents of children. This limitation implies that the results of the study may not be replicated using similar methodology and may therefore be unreliable (Polit & Beck 2008). The results also raise concerns regarding the appropriateness of the advice offered to parents because 26 parents who called the helpline with concerns regarding their child were advised to self care, but their children were later admitted. This indicates that either the advice to stay at home was inaccurate or the condition of the child worsened. On this premise, further research may be required to investigate the appropriateness of advice given by NHS Direct and the factors that influence the uptake of the advice, the latter is an area investigated by the current study.

In an effort to reduce the demand for GP out of hours services, one review recommended that all calls should be diverted to NHS Direct as it was postulated that this could improve the efficiency of call management (DH 2002). To explore this Lattimer (2005) undertook an observational study using a before and after design of the demand for the NHS Direct service, use of other services and trends. The study aimed to evaluate calls to GP out of hours services, the diversion to NHS Direct and the impact on the wider health care system, described as ambulance services and A&E departments within the study sites. The sample included 19 GP co-operatives across an unspecified geographical area in England that served in excess of 100, 000 patients. Eleven co-operatives consented to take part which provided care for approximately 50,000 patients. Data were collected for a year before and after the diversion of calls.

The results showed that only patients cared for by nine (47%) co-operatives were able to access NHS Direct with a single call. Other patients had to make at least two calls and then wait to be called back by a nurse. There was an increase in the demand for ambulance services during the study period within the study cooperatives, which the researchers suggest may have been as a result of patients not waiting for their calls to be transferred to NHS Direct. The researchers concluded that NHS Direct may not have sufficient capacity to support national implementation of call diversions from GP co-operatives (Lattimer et al 2005).

The large sample size of this study suggests that the study findings could be generalisable beyond the study population to other GP out of hours services. However limitations which included the absence of outcomes measures, makes it difficult to establish if the study objectives were met and if the approaches to analysis to predict and forecast data regarding the capacity of NHS Direct to take all out of hours calls from GP cooperatives were the most appropriate. The consequence of not being able to access NHS Direct on the patient's decision making behaviour was not explored. Investigating this phenomenon may have assisted in understanding callers' reasons for seeking help by calling an ambulance and also if the request for an ambulance was warranted. Furthermore, this may have provided useful insights into the urgency of the initial call to NHS Direct, the safety of the call waiting/call return system at NHS Direct and the caller's accuracy in assessing urgent care needs.

Calls to NHS Direct are triaged by support workers and directed to qualified nurses regardless of their previous nursing qualifications or experience.

It has been suggested that the clinical decision support software used by nurses at NHS Direct could restrict clinical decision making (Marsden 1998), particularly for nurses taking calls about children (Monaghan 2003). Monaghan et al (2003) aimed to determine if the call length and outcomes of Registered Sick Children's Nurses (RSCN) and Adult Nurses (RNs) at the NHS Direct call centre in the West Midlands were different when triaging children whose parents described their symptoms as a 'rash' or a 'fever' by telephone. A sample of 11 RSCN and 11 RNs with similar experiences, qualifications and length of time at NHS Direct were purposively sampled from 55 nurses during a one month period. Calls received during the study period totalled 1,281. Call outcome categories were categorised as: the nurse immediately called 999 and requested an ambulance for the child of the caller; the caller was advised to take the child to A&E; contact the GP immediately for an urgent appointment; make a non urgent but first available appointment with the GP; or offer the caller advice regarding self care of the child at home. Data regarding calls were collected from computerized call logs and analysed to compare differences between the call lengths.

The results showed that the mean length of calls taken by the RSCNs was statistically significantly shorter than that of the RNs. Statistically significant differences were also found regarding call outcomes. The number of callers referred to the 'routine GP appointment' category by RSCNs for 'rash' or 'fever' was higher than for RNs. RNs advised the callers to make an urgent appointment with the GP. The researchers suggested that this may be due to a lack of experience and confidence of the RN to assess urgency. Results regarding the differences between call durations for RSCNs and RNs and urgency of referral to the GP indicated that RSCNs had the appropriate experience and clinical judgement to quickly assess children over the telephone because of their paediatric qualification.

The results of this study suggest that staff working at NHS direct who are qualified children's nurses are more successful at managing calls from the parents of children with symptoms of rash or fever than staff who are not trained.

This finding is contrary to those of Stewart et al (2006), which were discussed earlier, that showed that the accuracy of diagnosis may be due to visual assessment and not experience. The expertise of the call taker is of interest for the current study where the telephone helpline at the study site was run by a midwife who was appropriately qualified to advise pregnant and postnatal callers and not a nurses or a health care work both of whom may be cheaper to employ.

Monaghan et al (2003) recommended that continuing professional development of all nurses regardless of speciality should be appropriate to meet the needs of the range of likely callers to the service. However for the continuing professional development programme to be effective, knowledge of the nurses' experiences of taking calls would be required. Further investigation may be useful to explore and understand the differences between specialist and non specialist knowledge and the decision making process, or less specialist knowledge and its association with defensive practice. The small sample size is a weakness of this study, but the large volume of calls taken (1,281) may have compensated for this.

The studies described above show that telephone helplines have some benefit to callers in relation to solving a problem or a concern at the time of making the call and reduce the use of GP services. However, evidence regarding the effectiveness of telephone helplines to 'free up' valuable clinical time and the efficiencies this has the potential to create is lacking.

To establish the impact of NHS Direct on primary and secondary care services with regards to 'freeing up' clinical time and the user's satisfaction with the service, a study was undertaken by independent research consultants commissioned by NHS Direct. Retrospective data collated from NHS Direct England data base in 2007, showed that 4,554 calls made to NHS Direct England in 2007 were analysed in 2008 (the sampling and analysis approaches were not described) and in depth one to one interviews were undertaken with 35 health care providers employed by primary and acute services, excluding employees of NHS Direct (IFF Research 2008). How the sample of health care providers was selected was not described. The results of interviews with these health professionals determined that referrals from NHS Direct nurses were appropriate and timely although these were not defined.

Of the 4,554 calls reviewed, the majority of callers (4,163/95%) followed the advice offered and were satisfied with the outcome. Of note, 1,867 (41%) callers were advised to self manage but no examples of what this entailed or whether this was successful in solving the problem or avoiding an unscheduled appointment were described. Findings indicated that the three main reasons why people called NHS Direct were as a result of a new health concern (2,960, 65%), for general information (1,000, 23%) and for an existing health concern that was not improving (546, 12%). If NHS Direct was not available, callers stated that they would have visited their GP (2,003, 44%) or attended A& E (1,320, 29%). It is unclear how many of these callers were advised by NHS Direct to contact their GP or were referred to A&E as a result of their call. Generally callers were satisfied with NHS Direct, with 4,098 (90%) callers reporting that they found NHS Direct efficient and helpful. How callers defined efficiency and how it was measured was not explored.

Whilst the results are encouraging, the limitations relate to a lack of clarity regarding the sampling approach, and how measures such as 'efficiency', 'appropriateness' and timeliness were defined suggesting that the results may not be reliable and should therefore be viewed with caution. Furthermore, it is unclear if the sample of health care providers was representative of nurses and doctors working in A&E and GP services which further challenges the reliability of the study results. It is also unclear as to how many of the 41% of callers advised to self treat at home were included in the 95% of callers who followed the advice given and found it helpful. The study aimed to measure the impact of NHS Direct in primary and secondary care services, however it is difficult to determine if this was reliably measured as it was the callers' intentions regarding which services they would use if NHS Direct was not available that were reported to demonstrate impact on other services. The validity of the study results regarding this finding should therefore be viewed with caution.

Snooks et al (2009) evaluated the impact of NHS Direct Wales. The researchers aimed to establish the callers' response to advice offered, particularly in relation to their subsequent actions, views about the appropriateness of the advice and any healthcare contacts made regarding the same concern following the call. An independent clinical panel applied a set of rules regarding all contacts to assess if actions were necessary and appropriate for treatments and investigations carried out. Actions were described as acts undertaken by patients advised by NHS Direct.

The rules were based on a set of assumptions regarding care needs: attendance at A&E was considered the highest level of care; followed by an appointment to see the GP as the next level of care; and in descending order in terms of the less intensive levels of care; nurse led services (minor injury units); community pharmacy services and lastly self care. The patients were expected to be directed to the lowest level of care required to meet their needs. The expert panel recorded processes of care including, treatments and examinations that a patient might report and matched these to the lowest level of care at which the treatment/investigation could be expected to be provided.

Postal questionnaires were sent to 2000 callers in May 2003 and to a subset of this sample of 1,200 callers in February 2004. The size of the subset sample was based on the number (450) and the quality of responses to the survey undertaken in 2000. The time frame between postal surveys was to allow for seasonal variations in responses. Response rates from survey one and two were 1033/1897 (54.5%) and 606/1204 (50.3%) respectively. The majority of respondents from both surveys stated that the advice they received was appropriate, helpful and easy to follow, although the nature of advice was not described. In both surveys nearly half of all callers made no further contact following their initial call, however when subsequent contacts were made, these were with GPs. The number of callers' who made subsequent contact with GPs and the reasons why were not specified by the researchers which may suggest a limitation of the study to capture these data.

The rules applied by the independent clinical panel resulted in more 'unnecessary' rather than insufficient actions taken. The majority of unnecessary actions advised by NHS Direct Wales concerned contacting a GP, emergency doctors, dentists and A&E. The reason why these actions were 'unnecessary' and why call takers thought that they were, was not described, information that may have been useful in understanding how this area of practice could be been improved.

Whilst the aims of the study by Snooks et al (2009) appear to have been met, the rules applied by the independent clinical panel appeared to be unsupported by empirical evidence. This indicates that they may be based on expert opinion, which may differ when shared with a different group of experts. The researchers acknowledge this and suggest that validation of the rules is required in future research (Snooks et al 2009).

2.4 Telephone helplines for specific health conditions

In addition to helplines available for general population use, there are a large number of telephone helplines that provide support for a wide range of specific health conditions. These services are funded by NHS Trusts, run by nurses and aim to provide safe and supportive advice and guidance with the potential to reduce hospital admission, attendance at A&E or a visit to the GP (Hughes 2003, Collette et al 2006, Birdsall et al 2008, Gischler et al 2008).

Hughes (2003) examined the nature and outcome of calls to a helpline for rheumatology patients run by specialist nurses in Surrey, England. Patient satisfaction and economic analysis were integral to the study objectives but how satisfaction was measured was not described. A postal questionnaire was sent to a convenience sample of 87 patients who called the helpline over a one month period in February 1999. An analysis of the calls database was also undertaken over three separate months spanning one calendar year to determine any changes to use of the helpline, review of repeat callers and seasonal variation. Questionnaires were returned by 63 (72%) callers.

The results of the study showed that 60 (95%) callers were satisfied with the advice offered, 38 (60%) callers stated that they would have made an appointment to see the GP if the helpline was not available, 17 (27%) would have taken other action (this was not defined) and 8 (13%) would have waited for their next rheumatology appointment. Nearly all of the respondents (62, 99%) said that they would call again if they needed help, and all were satisfied with the courtesy of the nurses. Repeat callers (6, 10%) sought to validate or clarify self care advice previously provided by the helpline and sought additional support regarding their initial concern, which reduced the need for a GP or hospital appointment. Data to inform the cost effectiveness of the rheumatology helpline was based on the number of patients who avoided an appointment with a GP (Hughes 2003). These data were collated from the returned questionnaires. Published costs of GP consultations were compared with the cost of the helpline nurse in processing and answering calls and an estimated cost of extra outpatient activity resulting from calls. When applying the figures on an annual basis, a cost analysis showed that the helpline was associated with savings to the NHS mainly as a result of the number of GP consultations that would potentially be avoided.

Although the results showed that the helpline service met the needs of callers and produced savings to the NHS, without exploration of the safety of the advice given by the helpline, it is

difficult to establish true cost savings, which is potentially a limitation of the study. The small sample size also suggests study findings should be viewed with caution.

Specialist helplines including a neurological conditions helpline (Collette et al 2006) and a diabetes helpline (Birdsall et al 2008) similarly showed caller satisfaction with the services, but little evidence regarding the callers' actions in response to the advice they were offered. Collette et al (2006) explored why individuals contacted a telephone helpline specialising in neurological conditions and their level of satisfaction with the service. A postal survey was sent to a purposive sample of 200 people who called the helpline over a six month period in an unspecified geographical area in England. Satisfaction measures were not described by the researchers.

Of the 70 (35%) questionnaires returned, 62 (89%) callers contacted the helpline for advice regarding their condition and eight (11%) for emotional support. Whilst satisfaction measures were not used in this study, specific questions regarding how useful they found the advice showed that 59 (84%) callers found the information and advice given 'just right'. The researchers concluded that the helpline benefited patients and reduced demand on NHS resources. Whilst the former conclusion was supported by the study findings, it is difficult to determine if the latter conclusion was supported, a limitation of this study. A further limitation is the small sample size which may be reflective of the number of calls made over the study period and therefore extending the sampling period may have increased this number. In addition the low survey response rate suggests that there may be sampling bias. Therefore conclusions regarding the success of the helpline service should be viewed with caution because of these limitations.

To help plan future requirements for local diabetes services, Birdsall et al (2008) undertook a survey of callers to a specialist diabetes helpline service in Peterborough, England in June 2007. The aim of the study was to identify the number, duration, nature of calls, type of callers and impact of calls on the workload of the diabetic nurse specialist. Data collection involved a review of 628 calls recorded on a database by the diabetic nurse specialist. The results showed that calls made to the helpline were from a diverse group of health professionals and patients.

Callers included: general practitioners (38, 6%), practice nurses (62, 10%), patients (276, 44%), nursing homes (25, 4%), care providers including relatives (25, 4%) and 200 (32%)

calls from a range of people including, ward nurses, doctors, dieticians, district nurses and diabetes care technicians. The results showed that over 50% of the demand for the helpline was from primary and secondary care health professionals. The authors concluded that the impact of the helpline on the diabetic specialist nurse's time was 'considerable', quantified as the total time (335 minutes) taken up by incoming calls during the study month.

The survey design was appropriate in meeting the aims of this study to establish the number, nature and duration of calls. Of note was the high use of the helpline by health professionals although this was not mentioned by the researchers as a concern, which may suggest that the helpline was implemented for staff and patients. It is difficult to understand how the study results showed that the impact of the helpline on the diabetic specialist nurse's time was 'considerable', without an exploration of the other areas of the nurses' work that were affected. The diabetic specialist nurse spent 335 minutes over a one month period taking calls which leaves the majority of the working week, approximately four days (based on a 37.5 hour week) to focus on other tasks. As data regarding usual call volumes were not presented, it is difficult to establish if the sample size of 628 was typical of other months. The researchers stated that the results of the survey emphasised the need for the helpline resource to be incorporated into the wider diabetes service. This was not explained but plausible conjecture suggests that this may be shared budgets across a range of departments/agencies that were found to use the diabetes service.

More recently Gischler et al (2008) evaluated use of a dedicated 24 hour telephone helpline on discharge from neonatal intensive care. The parents of 500 children born with severe congenital anomalies over a five year period (2000 to 2005) in Rotterdam, the Netherlands were invited to call the helpline with their concerns once discharged from hospital. The helpline was run by nurses working in an acute hospital setting. The study involved the observation and analysis of telephone contacts during this time including an evaluation of the social economic differences between callers and non callers. The frequency of telephone calls were categorized and recorded in relation to the congenital anomaly, further hospital admissions and consultations. The cost of providing a 24 hour telephone helpline was also calculated using salary costs.

The results showed that the number of callers to the helpline (170, 34%) from the study population over a five year period was less than 50%. Non-callers were more likely to be first-time parents, divorced, separated or immigrants. Nurses provided self care telephone

support to 14 (8%) callers, 12 (7%) callers needed emergency admission and 85 (50%) required specialist support from a doctor. The remainder of calls (59) were referred to a GP, or the infant was readmitted. The researchers concluded that the telephone helpline provided easy access to medical and supportive care for parents of children with congenital anomalies and that nurses could effectively run the telephone helpline with the back-up of paediatricians. The effectiveness of the helpline regarding caller satisfaction and the use of the advice provided by the nurses was not evaluated. Whilst the researchers noted the profile of the non callers, it may have been useful if reasons for not calling the helpline were also explored, particularly as non callers were from vulnerable groups who could be perceived as needing additional support. It is unclear if the 500 callers were the sum total of callers to the helpline over the five year study period or a sample. The sampling approach was not described but the sampling description suggests that convenience sampling was used.

The cost of running the helpline was calculated based on the cost of employing nurses to run the helpline and the training required, a secretary and a paediatrician, although it was not stated if costs for the paediatrician were based on full time, sessional or on call costs. Due to insufficient data collection only costs of calls during out of office hours were calculated. The researchers concluded that a nurse led specialist telephone helpline for parents of children with severe anatomical congenital anomalies could be run at a relatively low cost but cost data were not presented. The financial viability of a helpline with less than 50% uptake over a five year period was not mentioned as being of concern. With no before and after comparison or an estimate of costs it is difficult to conclude that there was benefit from the service and findings related to cost benefit should be viewed with caution. Whilst this study shows that nurses can provide self care advice over the telephone, this occurred for only 8% of callers and may be reflective of the specialist medical expertise required to meet the needs of these callers.

The studies discussed thus far refer to helpline services established for the public to make calls about general health or disease specific concerns.

Most studies described the use of telephone helplines and some have demonstrated the impact on other health services and user satisfaction. Section 2.5 presents studies that focus on maternity service helplines which have been established specifically for pregnant and postnatal women.

2.5 Telephone helplines for maternity services

Four studies were identified which assessed the outcomes of calls made by women to telephone helpline services specifically for women in early labour (Spiby et al 2006, Cheyne et al 2007, Kennedy 2007, Cherry et al 2009). Data on the role of maternity telephone helplines for all women using a local maternity service regardless of the stage of pregnancy are limited, with only two studies identified for this review (Appleby 2006, Team Hackney et al 2008).

The All Wales Clinical Pathway for Normal Labour is aimed at promoting normality in childbirth and minimizing intervention for women with normal pregnancies. The pathway was introduced in Wales during 2003 to 2004, although this was in the absence of evidence of benefit and no formal evaluation of the pathway was planned. The pathway comprises of a three part document designed to minimize writing, with each section also functioning as a protocol for practice. Part one informs a structured telephone assessment and provision of advice around the time of labour onset to women deemed to be at low obstetric risk, with the form used to record a maximum of three telephone interactions with women. Part two supports an initial clinical assessment of the woman who is considered to be in early labour and part three of the pathway informs the management of a woman in active labour. Midwives at all maternity units working in Wales were expected to use the pathway.

An evaluation of part one of the pathway aimed to determine women's experiences and views of the service, the views of health professionals and the impact on their work and the identification of process issues such as ease of access to the service (Spiby et al 2006). Midwives from seven of 13 hospitals which provided intrapartum care in Wales were invited to focus groups held at different locations across Wales. There was no reference to a sampling frame and a sample size was not described; therefore it is difficult to comment on the criteria used to establish the sample.

The researchers suggested that due to bureaucratic reasons there were problems with obtaining permission to undertake focus group interviews and only two were held: one in the South and one in the North of Wales. Data were collected from 21 midwives who consented to take part.

A questionnaire was also developed to elicit the views of staff. The questionnaire was printed as a newsletter and sent to the 13 maternity units in Wales. The number of midwives employed in each trust was not described, but only six questionnaires were returned, a response rate that offers little reassurance that the survey results were representative of the target population.

Women (46) who received early labour care informed by the pathway were recruited to the study. Recruitment took place in the postnatal period at the point of discharge to the health visitor by community midwives between May and August 2005. Computer-assisted telephone interviews were undertaken to capture their views.

Thematic analysis was used to analyse the data collated from the interviews with midwives. The results of these interviews, showed that midwives were generally positive about the helpline and suggested that it enhanced communication with women, improved consistency of advice and encouraged women to remain at home in early labour. However, some midwives stated that the pathway was rigidly applied, which they perceived to create an over reliance on the protocol and a reduction in exercising clinical judgement.

Women reported that they did not feel welcome to attend the maternity unit and for some, being sent home from the labour ward when they had perceived themselves to be in early labour, was not a decision they were happy with. Their satisfaction was associated with being treated as individuals, having longer and fewer phone calls to the maternity unit, the friendliness of the midwife and the confident way advice was given (Spiby et al 2006). Women's dissatisfaction related to personal fears which were unresolved following the calls to the helpline, an absence of support and reassurance during their early labour experience, not being treated with respect and being made to feel "silly" (Spiby et al 2006 p 150). With regards to the impact of the telephone assessment on workload, the study found that midwives perceived there to be a reduction of women attending labour ward who were not in established labour. This gave them more time to focus on other women.

Telephone support during early labour was viewed as having the potential to assist women to make decisions about whether to attend hospital or to stay at home. One could argue that early labour is a time when women may find face to face contact with a midwife more useful than telephone contact, particularly as the study findings showed that women were dissatisfied with the service for the reasons described above. This finding concurs with

Cheyne et al's (2007) study that aimed to explore the views of women (n=22) in Scotland who also used a telephone helpline. The helpline was designed to provide support to women in early labour and encourage them to stay at home for as long as possible after the perceived onset of labour. The sampling approach was not described in detail, but the description suggests that it may have been a purposive sample of women who attended childbirth support and breast feeding groups. Data were collected using semi structured interviews and analysed using latent content analysis. Two main themes were identified, 'Preparation for labour' and 'Being in labour'.

The results showed that, despite receiving telephone advice to remain at home in early labour, with the reassurance that this would not compromise their care or labour outcome, women expressed a desire to be in hospital and lacked the confidence to cope with labour at home. A combination of factors including uncertainty, pain and anxiety were found to influence women's decisions to stay at home or attend hospital after receiving telephone advice in early labour. The number of women who remained at home in early labour was not described. The researchers concluded that further research is required to explore the relationship between maternal anxiety and the timing of admission to the labour ward. They also suggest that 'further support' should be offered to women in early labour about staying at home to reduce their levels of uncertainty and to build confidence, but the nature of support was not specified. A strength of this study is the qualitative approach that allowed an in depth exploration of the views of women about their experiences to be completed, that have the potential to inform service provision. A limitation is the small sample size which suggests that the results may not be generalised beyond the study population.

A telephone helpline implemented in a maternity unit in east London in 2007 for the use of women during and after pregnancy was evaluated in one small study (Team Hackney et al 2008). The helpline aimed to provide women with direct access to a midwife and facilitate earlier access to maternity care for those women who had pregnancy and postnatal problems and concerns.

During the first year of the telephone helpline being established, over 7,000 calls were received which far exceeded the estimated target of one thousand calls (Team Hackney et al 2008). The evaluation of the service involved a telephone survey of 60 callers over a three week period at an unspecified time and a collation of call data held by the Hackney Maternity Helpline. Data were analysed to establish who called the helpline, the reason for calls made

and the ability of the helpline to deal with those calls appropriately. A telephone survey of 60 callers over a three week period at an unspecified time was also undertaken.

The results showed that callers found the helpline useful because they felt satisfied with the service and reassured by the advice offered. Reasons for these responses were not explored. The majority of the calls made related to clinical queries and social issues, although these were not described in detail. Calls to the helpline were made by pregnant and postnatal women (37, 62%) and health professionals (19, 32%) who were predominantly community midwives (5, 27%). Friends and relatives of pregnant or postnatal women also made calls to the helpline in a small number of cases (8, 13%). Responses to just over half of calls received involved referring callers to other services or professionals but these were not described. Details regarding to whom and where referrals were made were not described. The results also showed that there was a reduction in the number of women who attended the labour ward, not in established labour, but how these findings were established is unclear. It is difficult to comment on whether the aims and objectives of the study were met given these limitations.

The helpline midwife 'closed the call' on 38 out of 56 women who called the helpline during the study period. The definition of 'closing the call' was described as offering advice to the caller that was sufficient to deal with their query. However follow up regarding the actions taken as a result of the advice offered was not undertaken and it is unclear if women who called the helpline were satisfied that the advice resolved their concern, or if they sought further advice about the same problem, or booked an appointment with another member of the health care team, thereby doubling resources required to resolve the initial concern. Without this level of information, it is difficult to draw conclusions regarding the impact of the helpline in this particular case. This limitation and the small sample size in the absence of the sampling approach, suggests that the study findings may not be reliable and generalisable beyond the study population.

Appleby (2006) described the use of a maternity telephone helpline in Nottingham designed to provide telephone support to pregnant and postnatal women with the aim of freeing midwives' time to focus on clinical care. The author states that the helpline had a direct impact on the efficiency of front line staff, a positive impact on women and their families and a 50% reduction in admissions to antenatal beds in high and low risk categories. 'Efficiency' was not defined by the author and measures of efficiency were not presented. The helpline

was also viewed as having impacted on the role of the community midwives who received appropriate calls where clinical assessment was necessary and spent less time advising and correcting misinformation and less time visiting women. The study period, sample size, data collection methods and the approaches to analysis were not described by the author which suggests that the data and the claims made, about the helpline, may be based on opinion. Whilst the impact of this helpline appears to show positive outcomes, in the absence of research or audit data these claims should be viewed with caution.

More recently an audit was undertaken of a maternity telephone helpline triage service in a maternity unit in Forth Valley Wales during one month in 2006. The aim of the helpline service was to reduce the number of unnecessary admissions to maternity services, in particular, to the labour ward (Kennedy 2007). 'Unnecessary' admissions were not defined but this may be suggestive of women who were not in established labour. Data collection was undertaken by staff (4) who worked as helpline midwives at the study site. Data were collected on all calls to the helpline during the one month period. The audit results showed that 232 women called the triage service during the audit month. The gestational age of callers ranged from 36 to 40 weeks gestation. The majority of calls related to symptoms (167, 72%). The author did not define this term or make any distinction between physical and psychological symptoms, but the findings showed that 45 calls (19.2%) related to labour and 42 calls (25.1%) were for other reasons, including vomiting, and dizziness. Calls were received from 17 postnatal women but the reason for their calls was not described. Further audit results showed that 80 (48%) of the 167 women who called with a symptom received self care advice. It is unclear if the nature and impact of this advice were explored.

The authors stated that the results showed that telephone triage significantly reduced the number of women attending hospital and being admitted as inpatients. They also stated that the midwives working at the audit site noticed that their time was freed to do 'other things' and described this to be more time to care for women who were inpatients without worrying about answering the telephone. This finding is supported by Spiby et al's (2006) study discussed earlier. Whilst the audit results are positive, the claim regarding the impact of the helpline admissions to the maternity unit should be treated with caution in the absence of comparative data prior to the implementation of the helpline.

A similar audit was undertaken in an acute maternity service in Wales (Cherry et al 2009). The Royal Glamorgan Hospital, Llantrisant, established a telephone triage service run by

practice development midwives. It opened from 8am to 4pm Monday to Friday with the aim of reducing unnecessary admissions to the labour ward. Not dissimilar to Kennedy's (2007) study, a definition of unnecessary admissions was not provided. Cherry et al (2009) audited calls to the helpline service over a one month period to assess changes to call volumes occurring as a result of the telephone triage system. Over the audit month 154 calls were received by the helpline midwives but how these data were analysed was not described. The audit results showed that 86 (56%) calls were received from women and the remainder from midwives, GPs and ambulance control. Of the 86 calls received from women, 9 (10%) women were offered self care advice (which was not described) and the remainder, were either seen by the practice development midwife (30, 35%) who received the call, referred to acute services (23, 27%) or sign posted to community services. Whilst self care advice was only offered to 10% of the audit population, the results also showed that 52/154 (34%) women who called triage were managed outside of the acute setting although no further details were provided.

The audit results suggest that the helpline supported callers to attend the most appropriate place to meet their clinical needs, for example care at home by a community midwife instead of admission to the labour ward. The authors stated that this enabled appropriate care to be provided for women and an appropriate work load for labour ward staff. The authors suggested that the audit results were successful partly because of the clinical experience of midwives who answered the calls who were able to make sound clinical judgments regarding the care options of callers (Cherry et al 2009). This finding is not dissimilar to Monaghan's (2003) work discussed earlier that showed the differences in call management of paediatric trained nurses and general nurses when managing calls about the health concerns of children. It is not clear from Cherry et al's (2009) study if the audit involved benchmarking the audit results with the number and nature of necessary and unnecessary admissions to the labour ward, prior to the implementation of the telephone triage.

Collecting and analyzing these data may have provided evidence to support the claim that there had been a reduction in admissions to the labour ward as a result of the telephone helpline service. The audit findings highlighted key areas of maternity care provision influenced by a telephone helpline service that would benefit from empirical inquiry to inform further service development in this area.

2.6 Self care advice as an outcome of calling a telephone helpline

This section reviews what is known about self care advice offered by telephone helpline services and the relevance of exploring this phenomenon in light of the objectives of the current study and as a focus of current healthcare policy (DH 2005, DH 2010).

As discussed in chapter one, empowering individuals to take care of their own health as an outcome of the provision of contact with NHS staff is an approach supported and encouraged by current healthcare policy in England (DH 2010).

Currently there is no single definition of self care relevant to health accepted in the literature (Godfrey et al 2011). Most of the studies discussed in sections 2.3, 2.4 and 2.5 of this chapter, show that callers to helplines were advised in some way to 'self care', but interestingly this category of response was not defined, described or explored in most studies. Only three studies (Stewart et al 2006, Snooks et al 2009, IFF Research 2008) examined whether self care advice was followed but 'self care' was not defined. Six studies associated self care advice with a reduction in the use of health services (Munro et al 2000, Lattimer 2005, Collette et al 2006, Kennedy 2007, Cherry et al 2009), whilst others (Hughes 2003, Gischler et al 2008), showed that it had the potential to impact on other health services by reducing the demand for their use. Self care for people with long term conditions for example, diabetes is well established and is an important aspect of successful health care (Bodenheimer et al 2002, Linnell 2005). It has been found to improve health function, decrease readmission rates and promote quality of life for patients who have insulin dependent diabetes (Lorig et al 2001, Glasgow et al 2007). However these studies refer to self care taught to the patient by a health professional prior to discharge home from hospital. This may include for example, how to give an injection of insulin where learning takes place through demonstration and is different to self care advised over the telephone, which is the area of interest for the current study.

One recent study (Godfrey et al 2011) aimed to clarify the meaning of self care, by undertaking a two stage analysis of its meaning by examining the content of 139 definitions and the evolution of self care definitions from 1970 to 2010 using content analysis. The findings of the study showed that the definition of self care has progressed from a description of health and illness in the 1970's, to a definition that encompassed a holistic view of self care by the end of 2010. The authors concluded that self care definitions should include aspects that relate to "health, illness, disability, general outcomes, the performer of self care,

the action of self care, the relation to the healthcare professionals and the relation to the healthcare system” (Godfrey et al 2011, pg11). The authors also stated that “individuals perform self care by taking responsibility for their own care or for care of another “ (Godfrey et al 2011, pg 10) and that self care can be performed independently, or guided or informed by a health professional to promote physical and or psychological health (Godfrey et al 2011). The Department of Health definition of self care includes the action people take to care for themselves, but does not acknowledge the role of the health professional in advising this care.

For the purpose of the study described in this thesis, the description of self care proposed by Godfrey et al (2011) was used as a blueprint to explore the nature of self care advised to callers of a maternity telephone helpline service. This description was selected because it encompasses a holistic view of self care and includes the care of another, for example, in relation to the current study, a mother may provide care for her baby. The description also acknowledges the involvement of the health care professional. Other definitions of self care present a limited perspective (Levin et al 1979, Norris 1979, Houghton 2002). Houghton (2002, pg 4) for example, refers to self care as “the care of oneself without medical, professional or other assistance or oversight” This definition does not acknowledge the role of the health professional, who may advise self care and teach the caller how to undertake this care whilst remaining on the telephone.

The policy document, Self Care-A Real Choice, Self Care Support-A Practical Option (DH 2005), presents the DH definition of self care and sets out guidance for Primary Care Trusts, NHS Trusts and the Strategic Health Authorities in England of how to invest in self-care. The policy states that self care has the potential to reduce visits to the GP by up to 40%; outpatient clinics by up to 17% and A&E services by up to 50% (DH 2005).

The guidance also postulates that self care advice if successful has the potential to reduce spending on medication (DH 2005).

Whilst the basis for the reductions are unclear, the policy document makes reference to engagement with a wide range of key stakeholders and economic review of use of healthcare services to inform its position. The validity of these claims is questionable as they rely on self care to be successful in solving the problem or concern and avoiding an unscheduled appointment. Knowledge of why self care is effective for some and not for others would be

useful to inform future provision of self care advice. It is suggested that patients who have a greater propensity to successfully self care are likely to have a greater self efficacy (Gaines 2002, Tsay 2002). Self efficacy is defined as a person's confidence in undertaking a particular behaviour and overcoming barriers to that behaviour (Bandura 1994) and is discussed further in the following chapter.

A recent study explored the factors that either influenced self care for minor ailments or created barriers to obtaining care. The Proprietary Association of Great Britain (PAGB) promotes responsible consumer healthcare and develops research and policy regarding this. Over the last 20 years the PAGB has focused on "framing self care as a level of care in the NHS and its policies" (PAGB 2009 pg 4). To understand the factors that influence self care for minor ailments or create barriers to self care, the PAGB (2009) commissioned research to explore the attitudes and behaviours of patients, consumers, GPs, nurses and pharmacists regarding this. Minor ailments were described by the researchers as: backache, coughs and colds, headaches and migraine, toothache, indigestion, skin problems, allergy and respiratory problems.

Qualitative data were collected from one to one interviews in January, February and March 2009 from GPs, nurses and pharmacists. The sampling approach and the sample sizes for the groups interviewed were not specified. The key aim of the interviews was to understand minor ailments and attitudes regarding self care and identify language commonly used by consumers that would be used in the data collection tool for the quantitative phase of the study. However the process for achieving this was not described, therefore it is difficult to draw logical conclusions regarding the validity and reliability of the data collection tool. Quantitative data were collected in England and Wales from 1,317 consumers; 131 GPs, 130 nurses, 159 pharmacists and 401 patients through an internet based survey.

The aim of the survey was to explore the barriers perceived by GPs, nurses and pharmacists regarding self care and to explore the views of patients. The sampling and analysis approaches were not described by the researchers which limit the potential to replicate this study.

Survey findings showed that patients viewed minor ailments as lasting a brief period of time, that were easy for them to diagnose and that did not require a visit to the hospital. GPs considered that most minor ailments were appropriately managed by patients. The attitudes of

health care professionals and patients regarding increasing self care were mainly positive. However, health professionals suggested that patients would require more education to self care. This view supports further findings that showed that some consumers gave up on self care earlier than they needed to because they were unsure if it was effective.

On average consumers waited 6.5 days before seeking advice from a GP regarding a minor ailment and the majority of consumers did not spontaneously ask the pharmacist for advice. The results of the survey completed by pharmacists showed that they spent the majority of their time in the dispensary area; they believed that GPs and nurses should encourage patients to self care and they believed that patients trusted them to give advice. The results of interviews with GPs and nurses showed they did not have confidence in the advice offered by the pharmacist and furthermore, they believed that the patients had no confidence in seeking advice from the pharmacist. Nurses and GPs did not believe that patients preferred to self care or knew when self care was appropriate and suggested that they lacked confidence to do so. Consumers more likely to self care were British, female, older, prescription payers and full time workers. Further exploration of why these groups were more likely to self care would have assisted in understanding what influenced the uptake of self care, a study aim that was not fully achieved and a potential limitation.

The researchers concluded that the health professionals who took part in the study needed support to empower consumers and or patients to self care and support to assist them in feeling confident to do so. This conclusion is supported by Cheyne et al's (2007) study discussed earlier, which suggested that 'further support' should be offered to women in early labour about staying at home to reduce their levels of uncertainty and to build confidence.

The PAGB (2009) study findings provide interesting insights into the responsibilities of promoting self care and the views of the consumers.

A study strength is that research approaches within the qualitative and quantitative paradigms were used which enabled a large sample size for the web based survey and an exploration of an insider's view regarding self care by undertaking interviews with health professionals. However it is difficult to draw firm conclusions regarding the reliability of the study findings in the absence of details of study processes.

2.8 Summary

From the review of the literature presented in this chapter, it is clear that evidence regarding the use of telephone helplines is more established in the nursing and general medical fields than in maternity services. Although there is evidence that telephone helplines may reduce the subsequent use of health services by individuals immediately after the call has ended, evidence relating to the impact on health services, demand in the longer term, the outcome of advice offered and the impact on the workforce is limited. Whilst some claims about the immediate impact of telephone helplines on the patient experience and primary and secondary care services have been made, the methodological rigor of some studies discussed, suggest that the results should be viewed with caution. Methodological shortcomings of the studies reviewed influenced the focus on external and internal validity and reliability for the current study. In particular developing a methodology that explored the use of self care advice offered to callers' after the call has ended and the use of additional health services to solve the callers' concerns.

Advice to self care was explored by three studies, but the concept was not defined and the nature of self care and the factors that influenced self care not explored (Stewart et al 2006, Snooks et al 2009, IFF Research 2008). In the absence of a single definition of self care accepted in the literature, the description of self care proposed by Godfrey et al (2011) was used in the current study to explore the nature of self care advised to callers of a maternity telephone helpline service.

Study results of interest to the current study relate to several findings highlighted in this chapter: nurses being able to manage calls safely, nurse managed calls and avoidance of unscheduled appointments and visits to A&E services; midwifery managed calls where self care advice solved the callers' concern(s) and reduced unnecessary hospital appointments; caller satisfaction with the helpline service and the impact of telephone helplines on other health services.

The current study aimed to further explore these areas and generate knowledge with the potential to inform service design and workforce planning. The researcher's philosophical perspective and the theoretical framework that underpinned this study are described in Chapter 3.

CHAPTER 3

DEVELOPING AN EPISTEMOLOGY AND THEORETICAL FRAMEWORK

3.0 Introduction

As described in chapter two, evidence regarding the use of a telephone helpline available for women during all stages of pregnancy is limited. As a consequence, there is a dearth of evidence regarding women's experiences of acting on the advice offered by a maternity telephone helpline service and the views of clinical staff whose workloads may be influenced by the availability of this service. This study aims to explore these phenomena from the perspective of women who use a maternity telephone helpline and staff who may experience its impact.

This chapter commences with a reflexive account which describes my perspective as a midwife and how this experience influenced my study. The theoretical perspectives that informed this study are then described. The research questions and an exploration of how feminist epistemology influenced the generation of knowledge to answer these questions, including the study design and selection of an appropriate methodology are described, followed by a discussion of the Health Belief Model (HBM) which provided a theoretical framework for the study. The influence of the HBM on the data collection processes and tools is also discussed as is the relevance of exploring the health and advice seeking behaviour of women who use a maternity telephone helpline. This chapter is in part written in the first person because it reflects the personal perspectives of the researcher.

3.1 Reflexive account

My experiences of working as a midwife for 24 years informed my views that women have knowledge about their pregnancy and birth experiences that are authentic. I believed that services designed for women should be informed by them. However recognising my potential of bias toward the female gender and acknowledging that men may call the helpline on behalf of their partners, I ensured that all calls to the helpline were captured over the study period regardless of gender. Whilst my personal view was that maternity services frequently

developed and shaped services without using the knowledge of women who use the services, I acknowledged that seeking the views of clinical staff about the maternity telephone helpline would offer an alternative perspective.

I reflected on my experiences of working at the maternity unit two years and 11 months prior to the start of the study and the potential for personal bias. I recognised that my interest was objectively focused toward the phenomenon of interest however, my knowledge of the maternity unit had the potential to influence the assumptions I made about the organisation and delivery of maternity services. To reduce the chances of this occurring I obtained current policies, standards and guidelines from the study site which I used to inform current knowledge about the study site.

With 15 years experience as a senior midwife I had confidence in the efficacy of face to face consultation(s) and questioned the benefit of telephone consultations because I viewed the telephone to be an impersonal service where the value of non verbal behaviour is lost. In this regard, to reduce the potential for personal bias I employed a range of strategies that included: ensuring that data collection tools captured the experiences of use of a telephone helpline from the perspective of callers as well as staff who worked at the study site, thematically analysing the interview transcripts to enhance the trustworthiness of the findings and exploring the use of the telephone helpline by using prospective data recorded by the helpline midwife.

Contrary to my personal thoughts about the efficacy of the maternity telephone helpline, the staff working at the study site expressed their satisfaction with the helpline prior to the start of the study. In a meeting with the Director of Midwifery in December 2009 to discuss the research protocol and my duty of care, the Director of Midwifery spontaneously shared her views of the helpline; that it reduced the workload of staff and that women were positive about the service. Similarly in a meeting with the helpline midwife to discuss the study protocol, the success of the helpline was shared. The helpline midwife also referred to her success of guiding women to self care which she described as advising care over the telephone that she felt solved the woman's concern(s). The helpline midwife was not familiar with a definition of self care or evidence related to the nature of self care. Further, she was unsure if the self care that she had advised over the telephone avoided an unscheduled appointment. The meeting with the helpline midwife reaffirmed the need for the exploration

of self care advice and confirmed that her assessment of self care advice was aligned with the definition used for the current study.

Reflecting on the meeting with the Director of Midwifery and the helpline midwife I recognised that they both had drawn conclusions in the absence of empirical evidence that the helpline was a successful service for the women and for the maternity service. Personally I felt pressured by their expectations. I was however reassured by the rigour of the study protocol, the research design, methodology and analysis that were developed to ensure that the findings of the study were credible and trustworthy.

3.2 The research questions

The development of the research questions were influenced by several factors, including the researcher's interest in generating knowledge *from* women about services designed *for* women and in particular women's experiences of: using a maternity telephone helpline; the factors that influenced their decisions to call the helpline and whether women with particular demographic or obstetric characteristics were more likely to use the service; the need to develop an understanding of why women chose to act on, or ignore advice offered by the helpline midwife; and to provide an insight into how clinical staff viewed the role of a helpline within routine maternity care provision.

The specific questions this study aimed to answer were:

- Why do women who booked for care at the maternity unit call the telephone helpline?
- Did women use self care advice offered by the helpline midwife?
- Were women who use the telephone helpline satisfied with the service?
- Did the demographic, socioeconomic and ethnic profiles of women who called the helpline reflect the local population who accessed the maternity service?
- What were the views of the clinical staff regarding the role of the helpline and its perceived impact on their area of practice/work?

3.3 Generating knowledge from women about services for women

As an initial step to planning my study, I considered the type of evidence required to answer the questions posed above and the most appropriate research approach to use to generate the knowledge required. The process, by which one comes to know, is influenced by a range of factors including: culture, gender, class, and beliefs (Mason 2006). I considered these factors from the perspective of the study participants and my position as the researcher when seeking to generate knowledge about the phenomenon of interest. I also considered my philosophical position from the perspective of adopting an appropriate study design to enable the research questions to be answered appropriately. The philosophical tradition of positivism associated with quantitative research and the tradition of post-positivist philosophy associated with qualitative research (Polit et al 2001) were therefore explored.

Positivism asserts that knowledge is only authentic when generated from an experimental method of inquiry which assumes that the researcher's role is to explain, predict or control. This approach was not considered appropriate to address the research questions developed for this study because the findings may have been limited to numerical descriptions that may not have enabled an exploration of responses to be conducted. Positivism ignores subjective experiences and is not concerned with exploring for example, 'perspective', 'context' or 'feeling'. To appropriately answer the research questions this study required knowledge to be generated about human experiences, generated from the participants' experiences.

Positivism has been criticised for lacking depth and richness and for rejecting ways of knowing generated outside of experimental controls (Lincoln & Guba, 1985; Patton, 1990; Strauss & Corbin, 1990).

In contrast post positivists believe that research is an interactive process that allows a realistic understanding to be interpreted through the social and cultural context of participants' lives (Lincoln & Guba 1985). This philosophy acknowledges external and internal factors that influence personal experiences and the context of an individual's social reality and was of particular interest to the current study for these reasons. Furthermore, how I viewed the generation of knowledge about the use of a telephone helpline service was aligned with feminist epistemology, a form of post-positivist philosophy concerned with producing knowledge that makes a difference to women (Greene 2008). I had not planned to undertake feminist research to explore the nature of gender inequality and the discrimination of women. I was however interested in exploring feminist epistemology from the perspective of understanding how knowledge could be generated from women within the context of their personal experience.

Many ways of knowing have been extensively studied by cognitive psychology, knowing in terms of: physical, psychological, emotional, attitudes, beliefs and values, personal knowledge of others and cognitive styles (Stanley & Wise 1983). However how I perceived that knowledge was generated was influenced by feminist epistemology because it explores 'knowing' by considering the social location of the 'knower' and how this affects what things are 'known' and how they are 'known' (Hekman 2010, Greene 2008). Ways of 'knowing' have been located within three feminist epistemological traditions (feminist empiricism, postmodernism and standpoint (Harding 1991) which I explored, with a view to establishing a philosophical position aligned with how I perceived that knowledge should be generated about a telephone helpline. Furthermore I was keen to establish a philosophical position to inform the generation of knowledge that would reliably answer the study questions.

Feminist empiricism follows the existing rules and principles of the bio-medical sciences, for example, it is concerned with hypothesis testing, prediction and internal and external validity (Denzin and Lincoln 2005). Traditionally an experimental research design is aligned with feminist empiricism and is an approach that would not generate the personal experiences of using a telephone helpline.

In contrast, post modern feminists view the world as limitless stories or texts, value the contribution of the female perspectives to the nature of knowledge and believe that knowledge is located within the woman's life experiences. The corner stone of post modern feminism is feminist standpoint theory and it was this epistemology that influenced the generation of knowledge for this study.

Feminist standpoint theory developed in the 1970's and is described as a paradigm of knowledge production where knowledge has a standpoint that is 'particular' and 'situated' within a woman's personal experiences (Harding 2004). The location of a standpoint is described as being privileged because it provides an advantaged position that reveals the truth of an individual's social reality (Harding 2004). Feminist standpoint theory acknowledges the uniqueness and authority of knowledge that only women who in this case have experience of using a maternity telephone helpline, could generate. As I was keen to understand how knowledge could be situated and how this could be captured from women in the current study, I explored the concept of situated knowledge further.

Several feminist writers (Harstock 1999, Harding 2004, Hekman 2010 and Greene 2008) refer to knowledge held by women about their experiences as being located within an individual's experiences which has authority over knowledge generated by an individual without that experience. This is commonly referred to by feminist writers as 'epistemically privileged knowledge' (Harstock 1999, Harding 2004). This is a traditional feminist perspective of knowledge which assumes women are in a better position than men to face and understand the world of women due to their personal and social experiences as females (Harstock 1999, Harding 2004, Brooks 2007).

As a midwife and a woman, I believe that there are insights into pregnancy, childbirth and parenting uniquely held by women who have experienced these circumstances and as such, these insights were important to capture within the current study to address the research questions. However, epistemically privileged knowledge assumes that gender is the only precursor required to understand the views of other women regardless of their individual social, economic and cultural differences with the potential to ignore the heterogeneity of women. Harstock (1999) suggests that on this premise, epistemically privileged knowledge cannot be a basis for absolute truth but can be considered as a starting point.

This view validated my intent to collect data from sources other than from women who used the service, including documented data routinely collected at the study site and data from staff whose perspectives could provide insight into the impact of the telephone helpline on the maternity service.

Staff working at the study site were therefore purposively sampled for the study based on their experiences of the telephone helpline and not their gender. Capturing these data would also ensure that the generation of knowledge was reflective of the context from which the service was provided. This would assist in developing an understanding of the factors that influenced why a woman called the helpline and her subsequent use of advice offered.

It was important that the research design would enable the social and cultural context of participants' experiences to be explored and the evidence obtained relevant to answer the research questions. A case study approach allows the exploration of a phenomenon from within a real life context using multiple methods of data collection from different perspectives and was thus considered to be the most appropriate design for the current study. Within this context, due consideration was given to the method used to ensure that the epistemically privileged knowledge of women who used the telephone helpline was captured. Telephone interviews were therefore conducted as interviews had the potential to allow discussion and exploration of experiences from the individual's perspective whilst pragmatically causing minimal disruption. This is discussed further in chapter four.

3.4 THE HEALTHBELIEF MODEL AS A THEORETICAL FRAMEWORK

To be able to clarify the influence of feminist epistemology on the generation of knowledge and how this was used to construct observations about the use of the maternity telephone helpline, I was keen to understand factors that influenced the health and advice seeking behaviour of callers. Models of social cognition developed to enable the relationship between knowledge, attitudes and health seeking behaviour to be explored (Conner & Norman 2005) were considered as a theoretical framework for this study. The aim was to select a model that would assist in generating knowledge regarding *why* women called the maternity telephone helpline and *how* they acted on the advice offered.

The Health Belief Model (HBM) is one of the most frequently cited theoretical frameworks in the social cognitive literature (Wasileh 2002, Guvenc et al 2010).

It was developed by Rosenstock (1966) as a model for health educators to explain why people would not participate in health education programmes or practices to detect or prevent disease, for example participation in cervical screening programmes. The model claims to explore, explain, understand and predict health promotion and health education (Becker 1974; Rosenstock 1966, Wasileh 2002, Guvenc et al 2010). It has also been used to explore patients' responses to physical or psychological problems and patient compliance with medical advice with respect to health and advice seeking (Becker et al 1974). The HBM was therefore considered to be an appropriate model to assist in understanding the health and advice seeking behaviour of callers to the maternity telephone helpline and influenced the observations made about its use.

The model consists of four dimensions or 'constructs'; perceived susceptibility (to disease) perceived severity, perceived barriers, perceived benefits and cues to action (figure 3.2). The model is used by combining the individuals' perceptions of susceptibility and severity which influence them to seek health advice or undertake the health advice provided (Becker 1974). The likelihood of taking action is influenced by an individual's perception of the benefits, minus the barriers to taking action. The cues to taking action to seek health advice, or to comply with health behaviour may be internal (for example, a symptom) or external (for example a health promotion campaign). An individual may perceive that they are at risk of developing a disease because of personal perceptions of susceptibility to disease or perceived severity of the disease. The likelihood of taking the recommended health action is influenced by all four constructs.

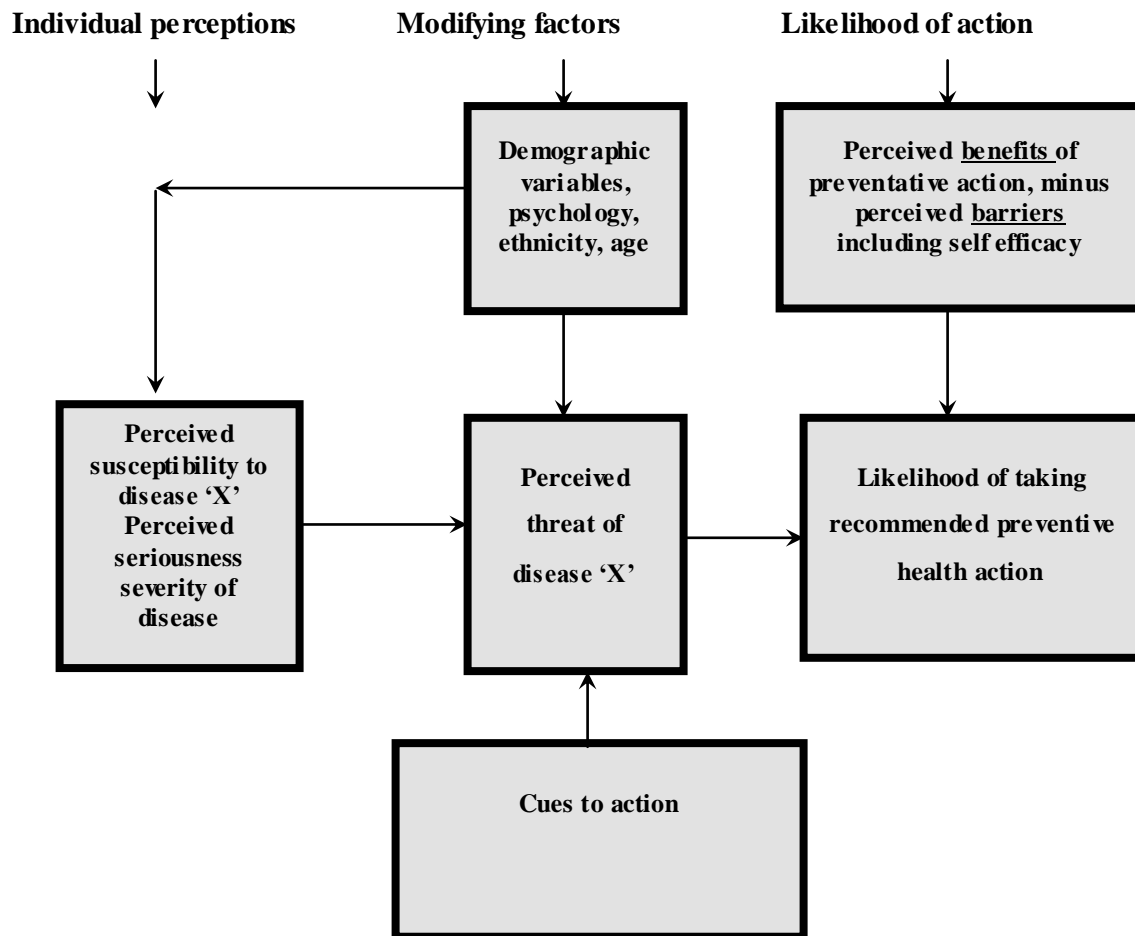
Modifying factors (figure 3.2) including socio economic, socio psychological, ethnicity and age may affect the individual's perceptions and ultimate health seeking behaviour are integral to the model (Rosentock 1982). This was of interest for the current study because the modifying factors acknowledged the heterogeneity of women who called the helpline and the subsequent generation of knowledge which was epistemically privileged. Later revisions to the HBM proposed by Rosenstock et al (1988) included expanding the perceived barriers construct of the model to include feelings of confidence in one's ability to perform a behaviour, described as self-efficacy (Bandura 1977). Feeling confident to undertake a behaviour is therefore associated with compliance to undertake the proposed health action. The model constructs appear to imply that rational thought precedes action.

Exploring women's perceptions of the severity of the concern which 'triggered' their call and the benefits of seeking advice, assisted in understanding what pregnant and postnatal women perceive 'severity' to include and if this was congruent with the health professionals' view. It was also considered important in the current study to explore and acknowledge a woman's belief in her ability to take action to maintain her own health or that of her baby. Because the maternity telephone helpline is a remote service (i.e. there is no face to face consultation), the self efficacy construct of the HBM was of particular relevance. Feminist writers such as Stanley & Wise (1993), refer to the role of self efficacy as enabling women to be emancipated from internal or external factors with the potential to inhibit their progress. This perspective was of interest to the current study particularly in relation to understanding the factors that influenced whether women acted on the advice offered by the helpline midwife.

The constructs of the HBM influenced the development of the data collection instruments for the current study and the content of the questions. The constructs presented in figure 3.2 were used to explore and understand why women called the maternity helpline. For this study, these were categorised as:

- The strength of the concern that triggered the call, this relates to perception of severity and cues to action, for example, the mother notes that there are less fetal movements than expected.
- Perceived severity, for example, knowledge regarding the problem and its association with negative consequences for mother and baby.
- The perceived benefits of making the call.
- The perceived barriers construct including self efficacy for example, belief in self to undertaken an action outweighs the perceived barrier for not doing so.

Figure 3.2 The Health Belief Model



(Rosenstock 1988)

3.4.1 Using the Health Belief Model to understand health behaviour

In the absence of empirical studies regarding the HBM and its use in maternity care provision, studies undertaken in other health settings were reviewed to examine the sensitivity of the model in understanding health and advice seeking behaviour. The HBM has been used in a number of health settings to explore the use of health services across different disciplines, including the development of educational programmes for osteoporosis by nurses (Sedlak et al 2000), to explore why people use accident and emergency services (A&E) for non emergency conditions (Walsh 1994) and to provide greater understanding of factors that influence women's attendance for breast screening (Holme et al 1999, Yarbrough & Braden 2001, Wasileh 2002). Whilst these studies explored the predictive element of the HBM they also aimed to understand health seeking and referred to the constructs of the HBM that enable this.

Yarbrough and Braden (2001) assessed the predictability of the HBM as a theoretical guide for predicting and understanding which women would attend for breast cancer screening. The study design involved an integrated research review where 16 descriptive studies using the HBM were analysed. The search strategy included CINAHL, Medline and cancer literature databases between 1990 and 1999. Theory based studies were found (66) including 16 that focussed on the HBM. Sample sizes in the studies ranged from 89 (Hyman et al 1994) to 3,684 (Drossaert et al 1996). The findings showed that the application of the HBM was inconsistent, with some studies adding additional variables to the model such as for example, 'anxiety' (Drossaert et al 1996) and others adding 'health motivation' (Champion & Miller 1996).

The barriers construct was the most frequently cited as being associated with screening choices across the reviewed studies. Barriers were not 'perceived' but related to 'actual' barriers, for example not being referred for a mammogram. Perceived susceptibility, severity and the benefits constructs were associated with the uptake of screening behaviour. No study validated hypothesised relationships between benefits and barriers or their relationship with susceptibility and severity which is contrary to the proposition by Rosenstock (1988). The proposition is that the likelihood of taking action is influenced by an individual's perception of the benefits, minus the barriers of taking action or perceptions of susceptibility and severity.

The findings did however show that the HBM explained 47% of the variance in screening behaviour and support the propositions of the HBM espoused by Becker (1974) regarding perceived susceptibility, severity and the barriers constructs influencing an individual to seek health advice. Self efficacy and the cues constructs were not cited as influencing the uptake of breast screening, but were found to be determinants of breast self examination in a later study (Jirojwong & MacLennan 2003).

This study investigated the use of the HBM as a theoretical framework for understanding the uptake of breast self examination (Jirojwong & MacLennan 2003). A cross sectional study of 145 women in Thailand were recruited through a snow ball sampling method using key contacts within the Thai community. Data were collected from postal questionnaires that incorporated breast self examination statements that were associated with the constructs of the HBM.

This study found that the HBM was a useful framework for identifying factors that influenced the use of breast self examination and that constructs such as self efficacy were likely to increase the uptake of breast self examination because women had an increased confidence to undertake preventative health behaviour. Women who believed that they had a high personal susceptibility to breast cancer were also likely to undertake breast self examination, a finding also supported by Yarbrough and Braden's (2001) study. The limitation of the study conducted by Jirojwong and MacLennan (2003) is the lack of evidence regarding the assessment of participants undertaking breast self examination. It is therefore difficult to establish if the participants' intentions were enacted. A further limitation relates to the sampling approach which implies that the sample may be biased to participants motivated by others to take part in the study and therefore more likely to practice breast self examination. The limitations suggest that the results may not be reliable and viewed with caution.

All constructs of the HBM were used to explore the uptake of breast self examination in a study undertaken by Norman and Brain (2005). The researchers considered the utility of the HBM (Becker 1974) as a framework for predicting breast self examination among women with a family history of breast cancer. Constructs of the HBM (figure 3.2) were applied to a prospective cohort of 1,000 women living in Wales with a family history of breast cancer. They were recruited into the project by their GP over an 18-month recruitment to predict breast self examination at scheduled nine month follow-up appointments. A discriminant function analysis was undertaken in which the constructs of the HBM were used as predictor variables to predict breast self examination. The results showed that self efficacy was the strongest predictor supporting Rosenstock et al's (1988) proposition that the perceived barriers component should be expanded to incorporate individuals' feelings of confidence in their ability to perform a recommended behaviour. There were no hypothesised relationships between benefits and barriers. The findings of Norman and Brain's (2005) study were unsurprising, as plausible conjecture suggests that participants may have had a perceived susceptibility to the disease because of a family history and were therefore more likely to have self belief in the benefits of undertaking breast self examination.

This may suggest sampling bias, but the results re-enforce the propositions of the HBM regarding perceived susceptibility to disease as being a construct that influences the uptake of health behaviour.

Abood et al (2003) evaluated the efficacy of an eight week worksite nutrition education intervention for University staff in Indiana in the United States using the HBM as a theoretical framework to increase nutrition knowledge and improve dietary intake through instruction and dietary exercises. A self selected sample of 53 University staff members were randomly assigned to the treatment group (28) or the control group (25). The intervention involved eight, one hour weekly education sessions to raise awareness about knowledge and beliefs about improving dietary practices for prevention of cardio vascular disease and cancer. The intervention also involved the use of the HBM constructs using a questionnaire approach that focused on health concerns, perceived susceptibility, perceived severity, perceived benefits, perceived barriers and self efficacy. The perceived benefits and perceived barriers constructs were given priority in this study based on a previous study's findings (Damrosch 1991), which found that for a change in nutrition behaviour to occur the perceived benefit of the behaviour must outweigh the perceived cost (Damrosch 1991).

All subjects from the treatment and control group rated items relating to these constructs on a 5 point likert scale. The results showed that perceived benefits concerning the adoption of positive dietary behaviours increased after the intervention in the treatment group, but there was no change in perceived barriers, a statistically significant finding. The authors concluded that the HBM could be successfully used as a theoretical framework to encourage healthful dietary behaviour change. Whilst the results of the study show that perceived benefits of positive dietary behaviours increased after tuition, there was no correlation with improved dietary behaviour. As the HBM was used as a measure immediately after the intervention was completed, continued perceived benefits were not assessed. Similar to the findings of Yarborough and Braden's (2001) study, Abood et al's (2003) study did not use a published measurement scale or formulae for combining the constructs of the HBM, a potential limitation of this study.

The HBM has recently been used to understand the health beliefs of women regarding cervical cancer and cervical smear screening. Guvenc et al (2011) aimed to understand the cultural beliefs of women regarding cervical cancer and the uptake of the cervical smear test. A questionnaire survey of 320 randomly selected women in Turkey was undertaken in 2007. Questionnaires were developed to include the constructs of the HBM and modifying factors including age and employment status.

The findings showed that all constructs of the HBM were reliable in assessing the women's health beliefs regarding cervical cancer and the cervical smear test and assisted in understanding why women would undertake such screening. The researchers concluded that the constructs of the HBM could be used to inform the development of effective cervical cancer screening programmes.

The studies discussed show that constructs of the HBM have assisted in understanding health and advice seeking with some constructs cited more frequently than others (perceived barriers, self efficacy). Of the studies reviewed, there are no validated hypothesised relationships between benefits and barriers or their relationship with susceptibility and severity and whilst the HBM claims that these relationships occur, the methodology is not presented by Rosenstock (1966). The studies discussed however, show that the model was useful in assisting to understand health and advice seeking and re-enforced the viability of using the HBM as a theoretical framework for the current study.

3.4.2 Other theoretical frameworks considered

When planning my study, other theoretical frameworks were considered but were subsequently rejected. These were the theory of planned behaviour (TPB) (Fishbein & Ajzen 1975) the Locus of control (LOC) (Rotter 1966) and the multidimensional health locus of control (MHLC) (Rotter 1966). The TPB proposes that behaviour is influenced by the individual's attitude to their behaviour as well as subjective norms (what significant others think) and what control they perceive they have over their behaviour (Ajzen & Fishbein 2005). The combination of the three variables, perceived control, attitudes and subject norms, generate an intention to behave in a certain way (O'Conner et al 2006). From this premise the theory espouses that certain behaviour can be predicted.

Whilst the TPB has been used to successfully predict health behaviours including alcohol consumption and breast examination (Collins & Carey 2007, Steadman & Rutter 2004), deliberate self harm and suicidality (O'Conner et al 2006), the theory has been criticised for its inability to enable an understanding of how likely the intentions are to cause the behaviour and as such health promotion approaches and care management practices will have little guidance when planning health promotion strategies (Armitage 2003). Knowledge of behavioural intent has the potential to inform the current study in terms of understanding the intentions of women who received advice on calling the maternity telephone helpline, but the

theory does not acknowledge gender, ethnicity, culture or socio-economic differences, moral norms and their influence on behavioural intent (Parker et al 1995, Conner & Sparks 2005). For the current study these omissions limit the potential to understand the context and social perspectives of the women calling the helpline which is a strength of the HBM.

Similar to the TPB, the LOC was a model developed to explore how people's beliefs about health and illness influence their actions (Rotter 1966). The LOC refers to an individual's perception about the main causes of events in his/her life. The theory espouses that an individual has an internal or external LOC. The belief that one can control one's own destiny is associated with having an internal LOC. The individual believes that action taken equals consequence and seeks to manage and control life events including health and illness (Wallston 1978). Rotter's work was later adapted by Wallston et al (1978) who added a third category to the LOC which categorised people who attribute their health to powerful others, (Wallston et al 1978) known as the MHLC. This refers to the belief that the actions and or instructions of doctors, other health professionals, friends, relatives, carers or any person that an individual considers to be more powerful, determine health outcomes. In the context of the current study, these individuals may be more likely to call the helpline.

The MHLC provides more of a theoretical operational framework for understanding health seeking behaviour than the TPB, but the theory leaves little room for establishing or indeed understanding individuals who may have a combined LOC. The theory does not acknowledge the significant and relevant impact of gender, culture and social and economic status on health behaviour which limits explanation of how people's beliefs about their health and illness affect what they do (Wallston & Wallston 1981, Baken and Stephens 2005). For the current study these factors limited the potential of this model as a theoretical framework.

3.5 Summary

The aims and objectives of this study were to explore the use of a maternity telephone helpline from the perspective of women who used the service and staff who worked at the study site. Feminist epistemology and in particular feminist standpoint theory influenced the generation of this knowledge and the observations of how use of a maternity telephone helpline were constructed. Case study design allowed the standpoint of women who had experience of using the maternity telephone helpline to be captured because it enabled an exploration from within a real life context. Because capturing epistemologically privileged

knowledge was not the basis for absolute truth, data were also collected from sources other than women who used the helpline. This included seeking the views of staff who worked at the study site and collating routinely collected data about the helpline service at the study site. Capturing these data ensured that the generation of knowledge was reflective of the context from which the service was provided.

To further understand the phenomenon of interest, the HBM was chosen as the theoretical framework to inform the study because it claims to explore, explain, understand and predict health education and health seeking behaviour. The model acknowledges the heterogeneity of women and factors that have the potential to influence health and advice seeking. The HBM influenced the content and structure of the data collection instruments (see chapter 4) and assisted in understanding women's experiences of using the helpline. The following chapter presents the study design and methodology.

CHAPTER 4

METHODOLOGY

4.0 Introduction

This chapter presents the research design and methodology and the influences of feminist epistemology to inform the study and the Health Belief Model (HBM) as a theoretical framework. The study's aims and objectives are presented, followed by a description of the study setting. Data collection took place during three different phases which for clarity are described in this chapter as phase one (5th January-16th February 2010), phase two (17th February-1st October 2010) and phase three (1st -30th June 2010). For ease of interpretation the phases are presented in a schematic (section 4.4.1, figure 4.3). A description of each study phase is presented including: design, recruitment, consent, sampling, data collection methods, pilot of data collection instruments, and data analyses. The chapter concludes with a description of the ethical principles considered when undertaking this study.

4.1 Aims and Objectives

Aims

This study aimed to explore the use and impact of a maternity telephone helpline service from the perspective of women who called the service and staff who provided clinical care in three areas of the study site that traditionally received high call volumes² namely: the Antenatal Day Unit (ADU), Hospital Birth Centre (HBC) and the Community Office (Study Site 2007a) The study also aimed to explore and understand the health and advice seeking behaviour of women who called the helpline.

2 high call volumes are interpreted by the study site as calls that interrupt routine care provision

Study objectives:

1. To explore why women sought advice via the maternity telephone helpline during and after pregnancy
2. To describe the type of self care advice offered to women who called the helpline
3. To identify the impact and outcome of this advice from the perspective of women who used the helpline
4. To identify the views of staff regarding the role of the helpline in areas of care provision that traditionally received a high number of calls from women at the study site

4.2 Study Setting

The study was undertaken in the maternity unit of a large teaching hospital in South East London where 6,500 women gave birth in 2010. The maternity unit is the main provider of maternity services in the London Borough of Lambeth, but also serves a smaller population of women from the London Boroughs of Lewisham and Southwark, where two other maternity units are located. Lambeth is the fifth most densely populated Borough in England, with a deprivation score among the top 20% (Lambeth PCT 2010). The deprivation score is based on the index of multiple deprivation which includes an assessment of seven domains that relate to deprivation of: income, employment, health, disability, education skills and training and the measurement of: barriers to housing and services, living environment, and crime (ONS 2010).

The population is ethnically diverse with over 60% of people living in the Borough born in countries outside of the UK. Black Caribbean and Black African communities reflect 35% of the total population (Lambeth PCT 2009). Similarly Southwark and Lewisham have a young, diverse, multiracial and multicultural population with only 52% describing themselves as White British. Both Southwark and Lewisham also rank highly in the seven deprivation domains (Southwark PCT 2009). Referred to as the teenage pregnancy capital of England, Lambeth continues to have the highest teenage conception rate in England with 267 teenage girls below the age of 18 becoming pregnant in 2008 (NHS Lambeth 2010). Data regarding how many teenagers book for maternity care at the study site was not available at the time of undertaken this study.

The maternity unit at the study site has a 38 bed postnatal ward and a 16 bed antenatal ward. Both wards run at full capacity 98% of the time, with demand pressures on beds influencing length of stay. The average length of stay for postnatal women who had a normal birth was 48 hours and three days for women who had a caesarean birth (Study Site 2007b).

Women who experienced complex medical and obstetric problems had considerably longer lengths of stay. Levels of support for women who chose to breast feed their babies was highlighted by Trust management as limited, with 88% of women initiating breast feeding at birth but only 45% of women exclusively breast feeding at seven days postnatal (Study Site 2008a). Neonatal re admission rates were also viewed as an indicator that the level of support newly delivered mothers received was not adequate. The main reason for neonatal re admissions was hypoglycaemia as a consequence of reported breast feeding problems (Study Site 2007b).

Facilities for birth at the unit include the obstetric led and the co located midwifery led birth centres, the former referred to as the hospital birth centre and the latter as the 'home from home'. The former is designed for women who require pharmacological pain relief and/or who have medical and or obstetric problems. The latter provides facilities for women who, classified as low risk, choose a natural birth. The home from home birth centre creates postnatal capacity because women who birth in this unit are not transferred to the postnatal ward but remain on the birth centre with their partners for a maximum of 24 hours from birth, prior to discharge home. Despite this facility the maternity unit experienced capacity and demand challenges, with the unit closing to admissions on six occasions in 2007, 50% more frequently than neighbouring maternity units (Study Site 2008b).

Women have a range of options regarding the model of maternity care they receive at the study site. The majority of women have access to care in the hospital, community and home environments and receive care from a midwife who provides all or part of their care. Other care options include: shared care with the GP and midwife, or with an obstetrician and a midwife, referred to as traditional care at the study site. Women who live in deprived areas of the community and teenage girls, were allocated to the caseload model of care (at the time that this study was undertaken) where each woman had a named midwife who provided continuity of carer during the antenatal, intrapartum and postnatal period 24 hours a day, seven days a week.

This model provided an enhanced, dedicated, focused care to women living in these areas that were purported to have a 45% higher death rate and are more likely to have problems accessing maternity care compared to women living in more affluent areas (Lewis 2007).

This model of care ensures that women with complex pregnancies who receive care from different members of the multidisciplinary and multi agency team receive the support of a known midwife throughout their pregnancy, a care practice advocated by national recommendations based on the Confidential Enquiry into Maternal and Child Health Enquiry (CEMACE) in the UK (Lewis 2007 et al 2011). At the time that the study was undertaken there were seven midwifery caseload practices that provided care for 1,512 women which accounted for 22% of women booked for maternity care and an estimated one third of women living in the most deprived areas (Study Site 2008c).

All women who booked for maternity care at the study site should have been able to access a midwife 24 hours a day seven days a week regardless of the model of care they were assigned to. In addition and regardless of the model of care, women were advised that they could call the maternity telephone helpline if they had any concerns about pregnancy, birth, postnatal recovery or with respect to the health of their baby. The aim of the helpline was to provide advice to pregnant and postnatal women supporting them where appropriate to self care at home, preventing an unnecessary hospital appointment, home visit, visit to the GP or attendance at the ADU or HBC.

The helpline aimed to provide support and advice to pregnant and postnatal women and was run by one band 7 midwife. No additional training was provided to work on the helpline. The helpline opening times were Monday to Friday 9am to 5pm, excluding bank holidays. When the helpline was closed or the helpline midwife was ill or on annual leave, women could either call the labour ward (open 24 hours), community office (open between 8-5pm) or the ADU (described below) depending on the nature of their concern. Women who booked for maternity care at the study site were informed of the telephone helpline at their first antenatal booking appointment. A sticker with the helpline number and opening times was secured to the maternal hand held records at this visit.

Telephone helpline audit data (Study Site 2007a) showed that the average number of monthly calls to the helpline was 400. The average number of calls managed over the telephone that did not require the use of further health services was 133 (33%), with 35 (9%) women being

offered self care advice. The nature of the advice and the response to the advice was not reported.

The maternity unit ran an ADU that provided facilities for women who had pregnancy problems. This unit opened between the hours of 9am to 8pm and provided care for approximately 800 women per month. Increasing demand and capacity pressures impacted negatively on closing times that were frequently extended to accommodate the number of women who attended the unit (Study Site 2007c).

Staff working in the ADU attempted to reduce demand problems by advising health professionals who made referrals to the ADU to refer women where appropriate to alternative care services for example, the GP or the community midwife if they were already booked under their care. This advice did not appear to influence a reduction in referrals to the ADU (Senior Midwife 2008).

4.3 Research design

A key focus for the researcher was to ensure that the research design enabled the social and cultural context of the participants' experiences to be captured from their perspective, an interest influenced by feminist theory as discussed in chapter three. Case study was selected as the most appropriate research design to achieve this because it is "an empirical enquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used" (Yin 2009 p13). Capturing the experiences of participants' use of the telephone helpline from their perspective was of particular interest to the researcher because it has the potential to acknowledge the social, economic and cultural factors that shape and influence beliefs and actions. The case study approach used for this study was the exploratory approach which is concerned with an exploration of a situation within a context (Yin 2009). This approach was of particular significance for this study because it acknowledges the contribution of context to the experience of participants using the case studied (Yin 2009). Other research designs including for example, experimental and quasi experimental approaches separate the subject under study from its context (Yin 2009).

Case study has its origins in naturalistic science and has been used by a number of disciplines including education, organisational philosophy, health, sociology and management science (Payne et al 2006). It is considered an accepted vehicle for undertaking research in a variety

of disciplines (Bergen & While 2000). Case study is an approach that is considered helpful when little is known about the phenomenon under study and is frequently used to generate new knowledge (Anderson et al 2010).

This was of particular relevance for this study as little was known about the use of a maternity telephone helpline and the health and advice seeking behaviour of women who use it. Yin (2009) asserts that even when much is known about a phenomenon, a case study approach can be used to test theory (Yin 2009). Whilst it was not the researcher's intention to test theory as a study objective, the predictive value of the theoretical framework (discussed in chapter 3) and its claims regarding factors that influence health and advice seeking behaviour were explored (chapter 3) and used as a basis to understand why women sought advice via the telephone helpline in addition to receiving their routine maternity care.

To explore the health and advice seeking behaviour of callers to the helpline required a research design that enabled a holistic in depth inquiry of the phenomenon. Case study was of further benefit here because it involved a systematic analysis of multiple forms of data that enhanced understanding of the participants and context, a key strength of this approach. For this study data were collected from hospital records referred to as caller proformas, telephone interviews and one to one focused interviews. These methods provided a range of data to complete a broad and in depth assessment of the case (Eisenhardt 1989, Hamel 1993, Stake 1995, Yin 2009).

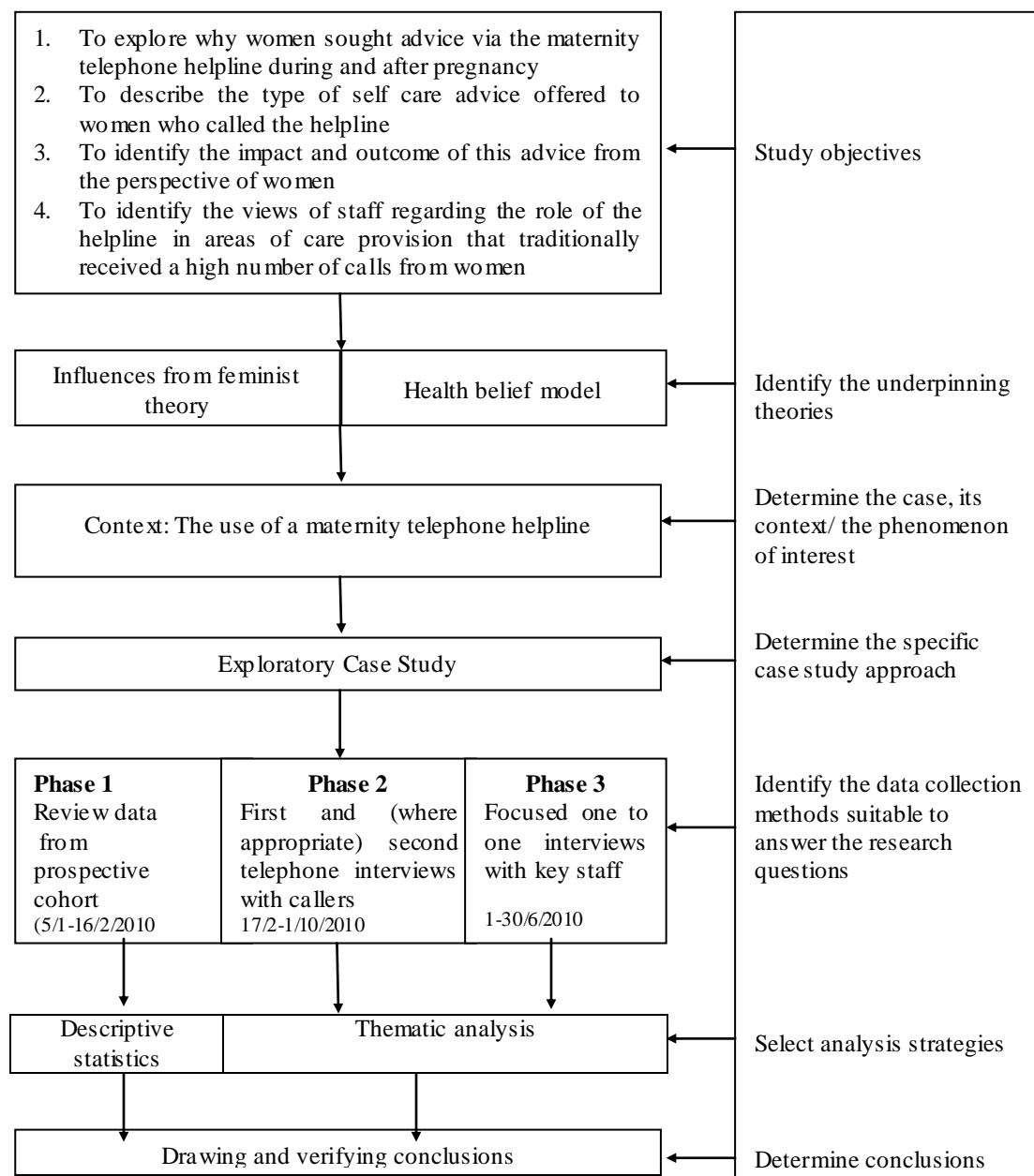
For this study the 'case' was defined as the maternity telephone helpline service. The observation of the case involved its use over a one month period. Use of the helpline was studied up to a maximum of three times during the study period (see sections 4.6.1) which assisted in gaining a better understanding of the use of the helpline from an individual's perspective (Gerring 2007). This contributed to the generation of knowledge *from* women, for services developed *for* women and was aligned with the researcher's philosophical perspective regarding the nature of knowledge. In addition, the principles of the health belief model, the theoretical framework that informed this study, complimented case study design as it identified context as influencing health seeking (see chapter 3, figure 3.2).

The following section describes the study processes informed by the researcher's epistemology and theoretical framework.

4.4.0. Methodology

To achieve the aims and objectives, both qualitative and quantitative data were collected over three study phases. Data collected in phase one informed phase two and are presented in section 4.5.1. Phase three is presented in section 4.7.0. To promote methodological integrity a schematic (see Figure 4.3) was developed to show the process of each study phase and assisted with the accuracy and precision of the research process (Bergen & While 2000, Stake 2000, Luck et al 2006, Yin 2009.)

4.4.1 Figure 4.3 A schematic illustration of the case study methodology



4.5.0 Phase One

Phase one was a service evaluation that provided the context for phase two. It involved collating routine data using a prospective cohort design to assess the reasons for all calls made during a one month period and to develop a profile of the callers. Data collected during this phase assisted in meeting objectives one and two of this study.

4.5.1 Sampling and recruitment approach

The inclusion criteria for this study phase included a convenience sample of all callers to the maternity telephone helpline over a one month period (January 2010). There were no exclusion criteria.

4.5.2 Data collection

Data were collected using the call proforma (appendix 2) routinely used by the helpline midwife at the study site to capture the volume and nature of calls received. Routine data were collected on each woman's hospital number, date of birth, occupation, ethnicity, medical and obstetric history, expected date of delivery, the reason(s) why the call(s) had been made, the outcome of the call(s) including the nature of self care advice if offered, if and how the caller's concern was managed and follow up action if required, including referral to other health care professionals or social services. Data recorded by the helpline midwife were taken by the researcher to be an accurate reflection of the call.

In the absence of the socio economic status of each caller routinely being collected by the helpline midwife, the occupation of the woman was used by the researcher to determine this by referring to the National Statistics Socio-Economic Classification. This is an occupationally based classification of class (ONS 2010) and is presented in table 4.2.

Table 4.2 Classification of social class based on occupation

Social Class based on Occupation
I Professional occupations II Managerial and technical occupations III Skilled occupations (N) Non-manual (M) Manual IV Partly skilled occupations V Unskilled occupations (Rose et al 2005)

The rationale for collecting these data as part of phase one included establishing if calls to the helpline were representative of the local maternity profile including for example, the deprivation score and ethnicity.

Each caller's proforma was reviewed by the researcher for completeness and accuracy. If data were missing or appeared incomplete, the researcher was able to access the hospital data base for each caller's demographic profile and complete missing categories. Access was granted because of ethical approval and an honorary contract issued by the study site for the duration of the study. This is discussed further in section 4.8. The hospital data base included baseline information on all data routinely obtained by a midwife during the initial booking visit which is the first antenatal contact.

4.5.4 Analysis

The data analysis strategy presented in table 4.3 was developed with the support of the statistician in the School of Nursing and Midwifery at King's College London (KCL) and the researcher's supervisors, to ensure that the approach was appropriate for the quantitative data collated, to meet the objectives of phase one. The Statistical Package for Social Sciences (SPSS) for Windows version 14.0 was used for data entry and analysis following data coding. Data coding was based on searching the data for commonalities, for example, calls that related to the baby were categorised as postnatal baby concerns and then subdivided into categories to describe reasons for the call, for example, 'jaundice' and 'bleeding cord'. Once coding was complete the data set was discussed with the statistician again prior to commencing statistical analyses. The data preparation steps assisted in ensuring that the data set was robust for the purposes of analysis.

This included ranking nominal data in the overall data set in preparation for non parametric testing. For example, the smallest value was ranked as one and the next smallest ranked as two.

Descriptive analysis was used to describe, organize and summarise the data collated. This enabled differences to be noted between cases regarding ethnicity, age, parity, reasons for calls and the nature of self care advice received. To assist in meeting the objectives of phase one, a comparison of data between cases was made to determine similarities and differences.

This was of note for example, when assessing for possible differences between length of call and the ethnicity of the caller, length of call and call outcome and the reason for the call and call outcome. To establish whether any differences were statistically significant, the Kruskal Wallis statistical test was applied. This non parametric test was used to compare groups of ranked data to determine whether frequencies identified were different from those that would be expected by chance (Steen & Roberts 2011).

Table 4.3 Data analysis strategy for phase one

Study objectives	Data & Source	Analysis	Aim of data analysis
Objective 1 To explore why women sought advice via the maternity telephone helpline during and after pregnancy	Quantitative and Qualitative prospective data from call proformas	Descriptive statistics Kruskal Wallis	To establish: <ul style="list-style-type: none"> • Reasons and length of calls • Reasons and outcome of calls • Call length and ethnicity of caller • Differences between primigravida and multigravida women
Objective 2 To describe the type of self care advice offered to women who called the helpline	Quantitative and Qualitative prospective data from call proformas	Descriptive statistics	<ul style="list-style-type: none"> • Frequency of self care advice • Self care advice and association with length of call

4.6 Phase Two

Phase two involved telephone interviews with women identified from phase one as receiving self care advice and assisted in meeting objectives two and three. The number of callers who were offered self care advice determined the sample size for this phase of the study.

4.6.1 Methodology

The aim of phase two was to identify the reasons for the call from the perspective of the women who used the service, to understand why advice was sought and establish how the self care advice offered was acted on by the women. A qualitative approach was used, with purposive sampling to recruit women who met inclusion criteria for this phase.

The women invited to participate in the interviews were identified from caller proformas completed by the helpline midwife over a period of one month as described in section 4.5.3. A second telephone interview was undertaken if women called the helpline and were offered self care advice on more than one occasion. The aim of the second interview was to establish why further calls were made to the helpline and how self care advice was used.

The second telephone interviews took place six to eight weeks post birth. This time was chosen because women would have been routinely discharged from maternity care with the expectation that they had recovered from the birth, with the transition to parenthood established. The date for the second interview was calculated from the woman's expected date of delivery by the researcher. The process for identifying women from the study population who continued to use the helpline involved the helpline midwife placing the letter 'R' on caller proformas which identified repeat callers prior to handing the proformas to the researcher.

4.6.2 Inclusion and exclusion criteria

The inclusion criteria for this phase included all callers who received self care advice during the study month and all callers offered self care advice on more than one occasion (continued use). The exclusion criteria for this study phase included: women who did not receive self care advice, women who experienced pregnancy loss, intra uterine death, still birth or neonatal death (established from the Trust data base via the helpline midwife), partners, friends and other family members who called the helpline on the woman's behalf and women who could not speak or read English.

4.6.3 Sampling and recruitment approach

Women were informed of the study by the telephone helpline midwife who used prepared information (appendix 3). The midwife asked women who fulfilled study inclusion criteria if they objected to receiving participant information and a consent form from the researcher inviting them to take part in the study. This question was asked at the end of each call. The helpline midwife identified repeat callers to the helpline from the caller proformas from the 17th February to the 1st October 2010. This time period included women who called the helpline for the first time over the study month and women who called the helpline from the same sample on subsequent occasions until they were six weeks post birth.

4.6.4 Consent

The researcher sent participant information and a consent form (appendix 4) to each woman who agreed to receive this information within one week of their call to the helpline. The names of women who declined the information were noted and their request respected. The consent form asked for the woman's permission for her maternity record data to be reviewed and for one and potentially two telephone interviews to be undertaken and recorded using a digital telephone recording system.

The first telephone interview took place when the researcher received a signed consent form from the woman, which confirmed her willingness to participate in the study. When making the call for the first interview, the researcher re-affirmed consent for the interview to commence and informed the woman that she could stop the telephone interview at any time.

At the end of the first telephone interview the researcher checked with the woman that she was willing to take part in the second telephone interview at six weeks after delivery should she use the helpline again. When calling the woman for a second interview the researcher reaffirmed that the woman consented to take part, giving her the option to opt out of the study at that point or at any time during the interview.

4.6.5 Data collection

Data were collected from the telephone interviews, which aimed to explore the story behind the individual woman's experience and allowed probing and follow up questions.

As discussed in section 4.3, establishing the individual's perspective was key to meeting the study objectives. The telephone interview also ensured minimal disruption to the woman and her family at a time when pregnant and newly delivered mothers focus a large proportion of their time on attending antenatal appointments during pregnancy and attending to a newborn baby postnatally. This approach also reduced the potential for intrusion unlike a face to face interview (Polit & Beck 2008), which requires additional effort from the interviewee to attend the interview or host the interviewer, if interviews were to take place in the home.

When developing the interview questions, consideration was given to the aims and objectives of the study and the constructs of the health belief model that aimed to explore health seeking. Interview questions sought to establish the caller's views of the helpline regarding access, reasons for calling, trigger for calling, the outcome of the call, satisfaction with the service and the use of self care advice (appendix 5). Consideration was given to ensuring that the interview schedule could validly and reliably investigate the phenomenon of interest. To ensure measurement validity, which is the extent to which an instrument measures what it is designed to measure (Goodwin 1997), questions were developed based on the aims and objectives of the study and a pilot study to 'test' interview processes was conducted (discussed in section 4.6.6).

To ensure content validity, which refers to how well the selection of items to be measured represents all facets of a given social concept (Grinnell & Unrau 2005), due consideration was given to ensuring that items selected measured the callers' experience. Questions were primarily developed with the aim of answering the research questions. Consideration was however, given to developing questions that enabled the participants to respond in their own words from their perspective and therefore open ended questions were designed for this purpose. Close-ended questions were only used when it was anticipated that there was a fixed number of alternative responses, for example, when callers were asked if they got through to the helpline midwife on their first call, the expected response was either yes or no. Close-ended questions that included fixed response multiple choice formats were also used for questions with a limited number of responses. Participants were asked to choose the response closest to their preferred answer. For example, question 12 refers to the callers' confidence in the advice offered by the helpline and offers a range of responses.

When formulating these questions, consideration was given to simplifying the participant's task and the researcher's analysis.

To ensure that important information was not lost, each multiple choice option was followed by a simple 'why' question which allowed the researcher to have a deeper exploration of the participant's choice of response. To establish satisfaction with the helpline a five point likert scale was developed. This scale enabled the participants to choose a response that represented their view. A neutral category was included, for example, 'undecided' followed by a 'why' question which provided the participants with an alternative response option and the researcher with the option of asking why the participant was undecided. When formulating questions, ambiguous statements or items with negatively phrased responses which have the potential to bias the participant's responses were avoided. Similarly, care was taken to develop questions that did not give an indication of the expected response or answer.

The theoretical framework described in Chapter 3 informed the development of the interview schedule, particularly in relation to formulating questions to explore health and advice seeking. The interview schedule was therefore designed to establish: reasons for health and advice seeking, what triggered the call, the perceived benefits of making the call and the barriers to seeking help, confidence to self care, perceived susceptibility and perceived severity of the concern, actions taken as a result of the advice offered, for example; was the advice followed or was there a need to consult with other people or services (friends, family, midwife, doctor GP and/or A&E) to solve the initial concern, levels of caller satisfaction and the general views of callers regarding their experiences of calling the helpline. The design of the interview schedule was also influenced by the principles espoused by Yin (2009) that refer to interviews for the purposes of case study being guided discussion, a principle that was reflected in the development of open ended questions.

To enhance methodological rigor, the development of the interview schedule was discussed with a statistician and the study supervisors to explore the appropriateness of questions in relation to achieving the aims and objectives of the study. Interview schedules for the first and second telephone interview were similar in their aim, the difference being that the second interview schedule was designed to collect data that recorded why more than one call was made to the helpline (appendix 6).

To maximise credibility and trustworthiness of the data, due attention was given to ensuring that the participants felt comfortable with the interview process.

This was achieved by ensuring that the time of the interview was conducive to the participant, reinforcing key points at the start of the interview including anonymity and the participant's right to end the interview at anytime. The length of the interview was also considered and the twenty minute time frame detailed in the participant information was adhered to, unless the participant required a longer period of time to answer the questions.

4.6.6 Piloting the interview schedule

To pilot the telephone interview schedule, telephone interviews were conducted in December 2009 with a convenience sample of the first ten women who called the helpline in that month. The telephone helpline midwife informed women of the pilot study. Participant information and a consent form were then sent to each woman. On receipt of the signed consent form telephone interviews were conducted. The aim was to ensure that all women interpreted the questions in the same way and that the instrument measured what it was intended to measure. Five women returned signed consent forms and were interviewed. No adjustments were needed to the interview questions following the pilot as women's responses demonstrated that they captured information relevant to the questions asked. Reassuringly, there were no requests from the women to repeat questions or clarify their meaning, which suggested that the questions were clear and unambiguous.

4.6.7 Analysis of interview data

Table 4.4 Data analysis strategy for phase 2

Study Objectives	Data Source	Analysis	Aim of data analysis
Objective 1 To explore why women sought advice via the maternity telephone helpline during and after pregnancy	Qualitative from telephone interviews	Descriptive statistics and thematic analysis	To understand triggers for health and advice seeking, and factors that influenced health and advice seeking.
Objective 2 To describe the types of self care advice offered to women who use the maternity telephone helpline	Qualitative from telephone interviews	Descriptive statistics and thematic analysis	To establish: The nature of self care advice and its frequency in relation to reasons for calls made to the helpline.
Objective 3 To identify the impact and outcome of self care advice offered to women who call the maternity telephone helpline from their perspective	Qualitative from telephone interviews	Descriptive statistics and thematic analysis	To determine the use of self care advice and if it solved the caller's concern(s) To understand what factors influenced the uptake of self care advice

The interview transcripts were read by the researcher with the initial aim of recognizing patterns within the data (Daly et al 1997, Boyatzis 1998), using a data driven inductive approach where themes identified were directly linked with the data (Patton 1990). Manual thematic analysis was undertaken because computer assisted qualitative data analysis software was unavailable for use by the researcher in the timeframe required. This was partly due to the incompatibility with soft and hardware computer systems.

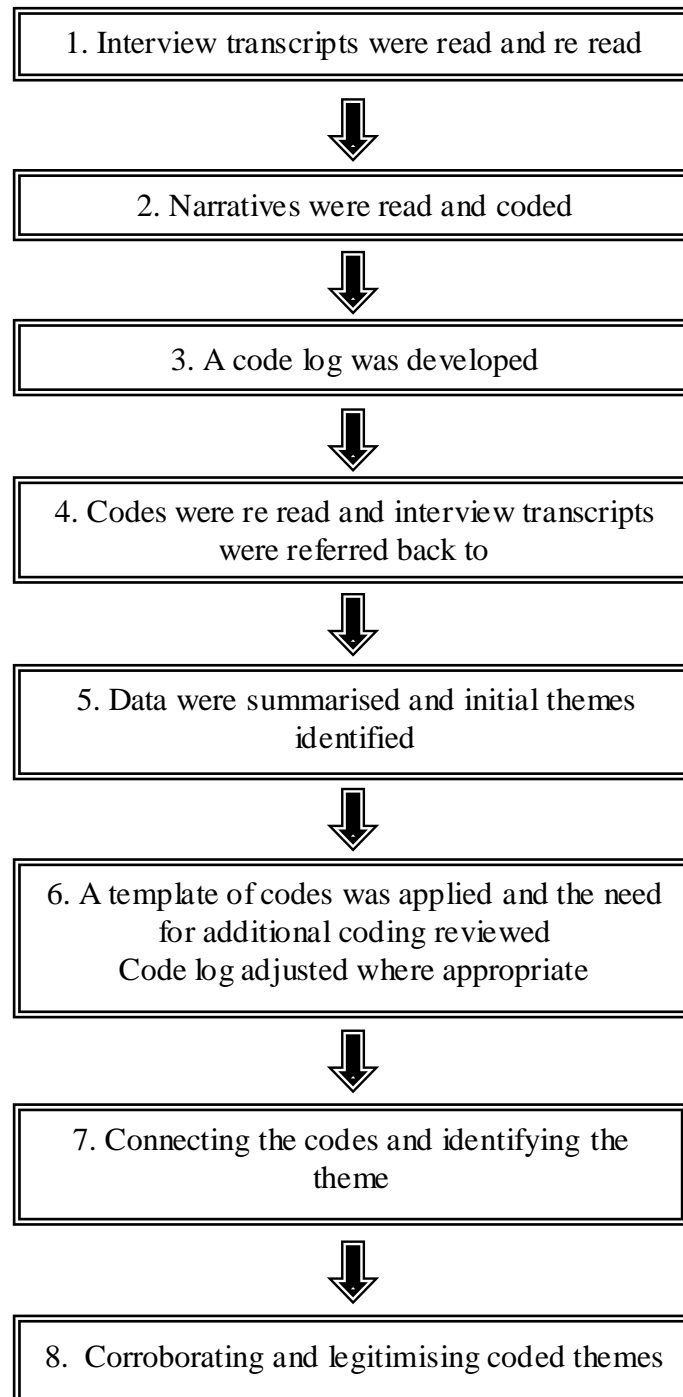
Other analysis approaches including content analysis were considered, but not used because they frequently rely on a pre prepared coding frame (Braun & Clarke 2006) which can restrict code development if the codes are not adjusted as new patterns emerge. Thematic analysis involves a search for themes within the data that emerges from the data and is not driven by the interpretation or philosophical interest of the researcher. The themes that emerged were therefore reflective and true to participants' accounts. Interview transcripts were re read as repeating the process assisted in the identification of themes (Rice & Ezzy 1999).

Each transcript was read individually and then as a whole to determine ideas and themes that progressed to the development of coded themes. A 'good' code is described as “one that captures the qualitative richness of the phenomenon” (Boyatzis, 1998, p. 1).

Code development involved the examination of data to identify themes that adequately reflected the data, which were then labelled as codes. As the same themes began to emerge, the codes were defined. Brief verbal descriptions were applied to each section of data which varied from five to eight lines. Verbal descriptions formed the basis of code development, but were modified as new meaning developed after reading and re reading the data. To test the reliability of each code the researcher revisited the data several days after identifying codes and re read the data and re-applied the codes.

This process aimed to validate the codes and the theme. The results of this process are presented in chapter 5. The process for thematic analysis is presented in figure 4.4

Figure 4.4 A diagrammatic representation of the stages undertaken to code phase two and three data



Adapted from Boyatzis 1998, and Crabtree and Miller 1999

4.7 Phase Three

Phase three involved interviewing health professionals and clerical assistants leading, managing and/or working in the clinical areas of interest at the study site, prior to the implementation of the telephone helpline service. The aim of conducting the interviews was to elicit their views regarding their experiences of the helpline and the impact on maternity services. For example views were sought regarding the interruption of clinical care as a result of call volumes in their respective clinical area. This process assisted in meeting objective four of this study.

4.7.1 Inclusion and exclusion criteria

The inclusion criteria for this phase included: ward clerks, clerical assistants, managers, staff who had a specific senior leadership role, namely the consultant midwife and community midwives who worked in areas that traditionally received high call volumes prior to the implementation of the telephone helpline. Exclusion criteria included staff who had not worked in areas of high call volume at the study site prior to this.

4.7.2 Sampling and recruitment approach

Purposive sampling was used to select the most relevant members of staff for interview. To achieve this, the researcher met with the Director of Midwifery at the study site and a list of staff to approach who had worked at the study site prior to and after the implementation of the helpline was developed by the Director of Midwifery. This approach was also influenced by an audit undertaken at the study site (Study Site 2007a), which highlighted staff groups working in areas most likely to receive unscheduled calls. These included clerical assistants based in the community office and the hospital birth centre who were responsible for: answering the telephone, responding to appointment queries and signposting callers for midwifery assistance. Prior to the introduction of the helpline, women were encouraged to contact the community midwives or caseload midwives where appropriate with queries and concerns (Senior midwife 2008). Community midwives were therefore also invited to be interviewed to share their experiences of call volumes since the implementation of the helpline. Managers and leaders of areas where high numbers of calls were received were selected because of their role and knowledge of maternity services.

4.7.3 Consent

Consent to take part in phase three was sought by the researcher sending via the post, participant information, a consent form and a covering letter inviting the participants to take part in a one to one interview with the researcher (appendix 7). On receipt of signed consent, dates and times for interviews were negotiated.

4.7.4 Data collection

The interview guide used for this phase (appendix 8) was designed to collect data that established the views of staff regarding the helpline with the aim of meeting study objective four. Interview questions were therefore developed to guide conversation rather than presented as structured queries. For example, to establish the views of healthcare staff about the impact of the maternity helpline service, staff were asked to describe their experiences of the helpline and how their routine work was influenced. This question was adjusted for managers and leaders to include their experiences of managing workload since the implementation of the helpline. Interviews were tape recorded using a digital telephone recording system with the participant's permission.

4.7.5 Pilot of the interview guide

A pilot study was undertaken to test the interview guide following ethical approval. The aim was to ensure that members of staff interpreted the questions in the same way and that the instrument measured what it was intended to measure. The convenience sampling approach used, involved sending participant information including a consent form to ten community midwives who worked at the study site in December 2009. Five community midwives were interviewed after signed consent was received and were excluded from being interviewed for the main study. This ensured that interview responses for the main study were not influenced by pre conceived ideas formed as a result of being involved in the pilot study. There were no changes made to the interview guide as a result of the pilot study.

4.7.6 Analysis

Thematic analysis was used to analyse these data. The process has been described in section 4.6.6 and the strategy is presented in table 4.5

Table 4.5 Data analysis strategy for phase three

Study objective 4	Data & Source	Analysis	Aim of data analysis
To identify the views of staff regarding the helpline in areas that traditionally received high call volumes (ADU, HBC and the community office)	Qualitative from focused one to one interviews	Thematic analysis	To establish: The views of staff regarding the role of the helpline and its impact on maternity care provision If any differences were noted in the volume of telephone calls since the implementation of the helpline

4.8 Ethical Considerations

To ensure the absence of harm, trauma, anxiety and discomfort to those involved in the study, ethical and legal issues were considered. Ethical approval was sought from IRAS which is a single system for applying for the permissions and approvals for health and social care research in the UK (IRAS 2008). Ethical approval was granted for this study on the 5th October 2009 (reference 09/H0714/50 (appendix 9). Local site approval was also sought and granted by the research and development department at the hospital where the research was undertaken (registration number RJ1 09/N207 appendix 10).

The researcher also obtained a research passport issued by the Research and Development Department at the study site. This process involved Criminal Records Bureau and occupational health assessment. The passport was an honorary research contract that stipulated the terms and conditions of the researcher's conduct whilst undertaking research at the study site. It allowed access to the maternity unit and patient data over the study period.

As discussed in section 4.6.4, to avoid intrusion and inconvenience to the study participants, telephone interviewing was used as a method of data collection as this method allowed flexibility and reduced the potential for intrusion unlike a face to face interview. Although using this method of data collection had the potential to exclude women who did not have a telephone, pay as you go mobile phones are widely available and therefore reduced this risk (Spiby et al 2006).

Women who consented to take part in the study may have experienced a spontaneous or therapeutic abortion, an intrauterine death, still birth or neonatal death prior to the telephone interview taking place. To avoid intrusion at this difficult time, these women were to be excluded from the study (see section 4.4.2). This process was facilitated by the researcher checking the status of the pregnancy and birth with the helpline midwife prior to the second telephone interview.

If during the telephone interview a woman complained about inappropriate care or expressed physical or psychological trauma she would be invited by the researcher to contact the Director of Midwifery who had agreed to deal with concerns of this nature during the study period. The woman would be reassured by the researcher that there would be no change in the relationship with healthcare professionals as a result of raising concerns or making a complaint.

Data generated from telephone and focused one to one interviews were electronically tape recorded and saved on to a password protected laptop computer owned by the researcher, where the documents were secured with document level encryption. These data were also saved on to an encrypted USB stick held by the researcher. Data will be stored for seven years and then destroyed in accordance with the King's College London records disposal schedule (KCL 2004). To further ensure the confidentiality of personal data, the researcher adopted the principles outlined in 'Guidelines for Good Practice in Academic Research (KCL 2002), which emphasises the researcher's responsibility for ensuring the accuracy, completeness and security of sensitive research data. Following these principles data were treated in confidence and anonymised by referring to the interviewee by designation for staff interviews and callers to the helpline by numbered code.

4.9 SUMMARY

This study aimed to explore the use and impact of a maternity telephone helpline service from the perspective of women who used the service and staff who provided clinical care in three areas of the study site that traditionally received high call volumes. The study design and methodology were influenced by feminist standpoint theory and the health belief model framed the study. This chapter has presented the methodological process adopted to undertake this study including the benefits of using a case study design and methodology that has the potential to meet the study objectives. Data collection took place during three different phases and included: the collating of prospective cohort data in phase one, seeking the views of women who used the telephone helpline through telephone interviews in phase two using a convenience sample of callers for phase one and two and one to one interviews with staff working at the study site for phase three using a purposive sample of staff to establish their views of the helpline. The development of the data collection tool for phase two was influenced by the constructs of the HBM and data analysis involved the use of thematic analysis for qualitative data and univariate and bivariate analysis for quantitative data. The following chapter presents the study findings.

CHAPTER 5

RESULTS

5.0 Introduction

This chapter presents the results from each of the three study phases which were completed to meet the study aims and objectives. Phase one data are the results of the service evaluation involving a prospective cohort study of callers to the telephone helpline over a one month period, Phase two presents the results of the qualitative data analyses derived from the interviews with women and phase three presents the results of the qualitative data analyses derived from interviews with health professionals and clerical assistants at the study site.

5.2 Phase One

The estimated number of callers to the helpline during the study period was expected to be approximately 400 a month, based on an audit of calls to the helpline made each month from the 1st October 2007 to the 31st December 2007 (Study Site 2007a). The actual number of calls to the helpline during the one month study period was close to this estimate at 476. Calls were predominantly made by pregnant or postnatal women (422, 89%) booked for their maternity care at the study site and of these, the number of women offered self care advice as defined in Chapter One was 60 (14%). Fifty calls to the helpline were made by community midwives and the remainder (4 calls) were made by partners or friends and were not analysed further. Results are presented for calls made by women (422, 89%) and the midwifery staff (50, 10%). Calls to the helpline were made during the hours of operation (9am to 5pm) with no peaks in call volumes associated with different times of the day noted during the study period.

Baseline maternal data

Calls to the helpline over the study month were related to antenatal (318, 67%) and postnatal (104, 22%) concerns and queries. Whilst calls were received from primigravida and multigravida women, the majority of callers were primigravida. This section presents the socio economic and demographic profile of callers to the helpline and reflects the total calls (422) made to the helpline from pregnant or postnatal women over the study month with reference made to calls from midwives where relevant.

Age and ethnicity

The age range of the 422 women callers was 18 to 42 years. Only 25 women (6%) were aged under 21 (18-20 years).

The ethnicity of callers was either recorded on the 'caller proforma' completed by the helpline midwife (324, 77%), or where these data were missing (98, 23%) attempts were made by the researcher to retrieve these from the hospital database. In descending frequency the recorded ethnicities were: White British (184, 44%), Black African (73, 17%), White Other (66, 16%), Black Caribbean (53, 13%), Asian British (14, 3%), Malaysian (10, 2%). The ethnic origin of 22 (5%) women was not identified from either source.

Socio economic status

Of the women who called the helpline who had their occupation recorded in the routine maternity records, 180 (43%) were classed as being in professional and 140 (33%) in unskilled occupations. There were no recorded data on occupation for the remaining 102 (24%) women.

Reasons for calls made

This section presents the reasons why calls were made and the outcome of these calls and refers to the 476 calls made to the helpline. Associations with calls made and any maternal characteristics are described to assist in understanding if demand for the telephone helpline service was influenced by particular maternal socio-demographic or obstetric characteristics.

The most frequently documented reason for calls to the telephone helpline was to ask for the results of investigative tests, including results from routine blood and urine tests. This accounted for 210/476 (44%) calls. Over the one month study period, the majority of these calls were from antenatal women (175/210, 83%) and 35/201 (17%) calls from midwives.

The remaining calls (266) were made for a variety of reasons (table 5.6). Eighty three calls were categorised by the researcher as general enquiries, which included requests for information about hospital tours, checking if antenatal clinics had been cancelled due to the severe snowfall affecting London at the time of data collection for this phase of the study, questions regarding clinical procedures including for example, the process for the nuchal test and induction of labour. Within this category 15 midwives (6%) sought information on various issues, including, aqua natal classes (2), antenatal education classes (3), seeking confirmation regarding investigative tests for varicella (2) and a request for information regarding a thalassaemia support group (1). The remainder of calls made by midwives (35, 70%) were for the results of investigative tests.

If a woman called the helpline for more than one reason, calls were categorised as a combination of concerns. Within this category there were 26 calls which included: how to deal with a dog bite, how to avoid constipation, how to manage painful wrists, itching scalp and swollen ankles. Pain that was not in the abdominal area was presented as 'pain' in table 5.6 and included back pain, pain in the knees and wrist.

The number of calls to the helpline was assessed by a woman's parity as it was anticipated that the helpline was more likely to be used by women having their first baby'

Calls made by primigravida women (288) included: request for the results of investigative tests (77, 27%), general enquiries (83, 29%) request for appointment (41, 14%) early labour (14, 5%), abdominal pain (15, 5%), postnatal concerns (22, 8%), combination of reasons (22, 8%), blood loss from the vagina (14, 5%).

A lower number of calls were made by multigravida women (134), which included: request for the results of investigative tests (98, 73%), request for appointment (19, 14%), postnatal concerns (11, 8%), abdominal pain (4, 3%), early labour (2, 1%)

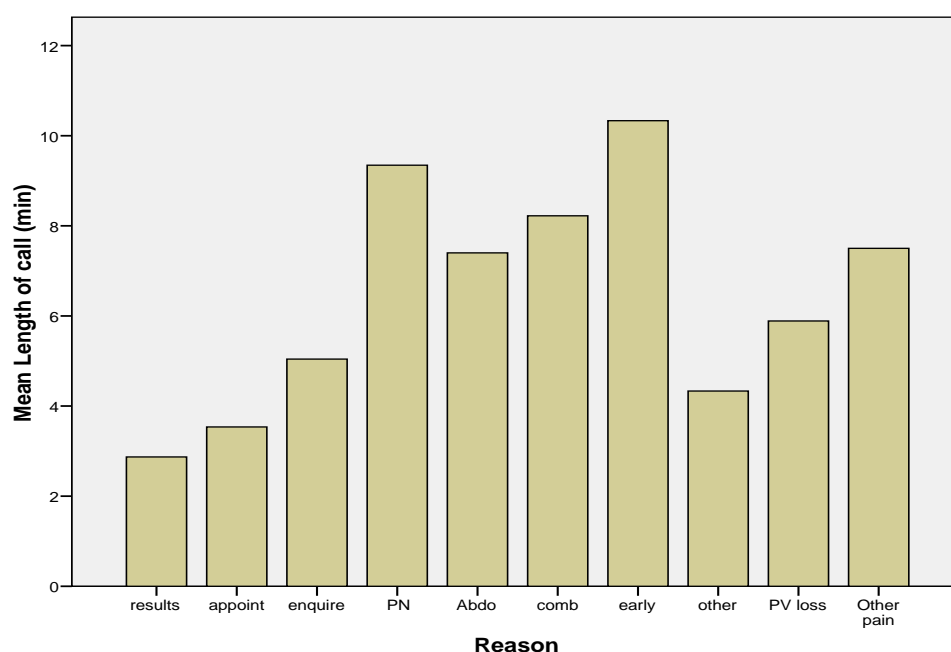
Table 5.6 Reasons for all calls made to the helpline

Reason for call	Number of callers	Percent
Request for results of investigative tests	210	44%
General enquiries	83	17%
Request for appointment	60	13%
Postnatal concerns	33	7%
Abdominal pain	19	4%
Pain	15	3%
Early labour	16	4%
Blood loss from the vagina	14	3%
Combination of reasons	26	5%
Total	476	100%

Call duration

A potential association between reasons for calls made and the call duration was explored to assess if there were particular reasons for a call which took longer for the midwife to deal with than others. Women who reported signs and symptoms of early labour (16) had the longest mean average call time, 10.9 minutes ($SD = 0.8$) (chart 5.1) than women calling for all other reasons.

Chart 5.1 Duration of calls and reasons for calls



Appoint=appointment, PN=postnatal, Abdo=abdominal pain, comb = combination of concerns, early=early labour

5.2.6 Outcome of calls

To assist in meeting objective three, the outcome of calls was analysed. Over half (270, 64%) of the women who called the helpline were offered information by the midwife that required no further intervention or referral (Table 5. 7).

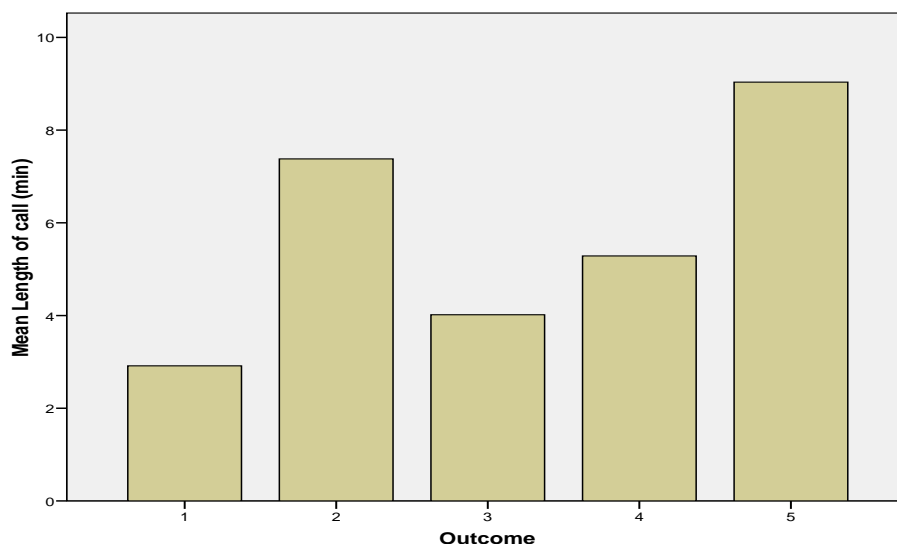
Table 5.7 Outcome of calls

Outcome of call	Number of callers	Percent
Results given	210	49%
Next appointment confirmed	60	14%
Responses to general enquiries	49	12%
Request to come to hospital	37	7%
Sign post to other services	6	1%
Self care	60	14%
Total	422	100%

5.2.7 Call outcome and mean call duration

Call outcomes and mean call duration were also explored to assess if there was an association between the time taken to complete calls and the calls that concluded with no further intervention required to solve the initial concern, for example giving the results of investigative tests. Calls ranged between 2.9 and 9.3 minutes. The 60 women offered self care advice had a mean call duration of nine minutes (9.01, *SD* 0.2). Calls that took less time to conclude were those where women had requested results of investigative tests and those who asked for appointments to be made (60, 13%). Calls that resulted in advice to come into hospital had a mean call length time of 7 minutes (7.53, *SD* 0.9). See chart 5.2.

Chart 5.2 Call outcome and mean call duration



1=seeking results, 2=to come in, 3= appointment, 4=general information, 5=self care

5.2.8 Frequency of calls by parity

When parity of the caller was explored, this appeared to be associated with the frequency of calls made. A higher proportion of calls were made by primigravida women (288/422, 68%), with fewer calls made as the number of previous births among women increased. There were 113/422 (27%) calls from women with one previous child, 17/422 (4%) calls from women with two children, and only four women called the helpline who had three or more children.

5.2.9 Duration of call by parity

When call duration was examined by parity, although more calls were made by nulliparous women, calls made by multiparous women took longer. Women with three or more children, although the smallest group of women in the sample, had the longest call durations for non labour calls (7.53, SD 0.9) compared to the mean call length for primigravida (5.9 minutes). Differences however were not statistically significant ($p=0.7$) probably due to their small numbers.

5.2.10 Ethnicity and duration of call

It was important to explore if there were any associations between call duration and ethnicity, as the study site served a diverse multicultural population.

To establish if the duration of calls differed by a woman's ethnicity, mean call durations were calculated and the Kruskal-Wallis test applied to establish if differences in call lengths were significant. The mean length time of calls from women described as Asian or Asian British were longer than those from women from other ethnic backgrounds although this difference was not statistically significant. (Kruskal-Wallis test: $p = 0.9$).

5.3 Phase two

The results presented for this phase describe the type of self care advice offered to women; identify the impact and outcome of this advice from the perspective of women who used the telephone helpline and show why women sought advice during and after pregnancy. Findings will support meeting objectives one, two and three.

The results are described in two sections. Firstly the response rate and the baseline characteristics of women who were interviewed are described, and where relevant, compared with those of the women who did not accept the invitation to be interviewed. This is followed by the results of thematic analysis. Quotations have been selected to illustrate themes where relevant.

5.3.1. Response rate

Over half (34, 57%) of the 60 women who were offered self care advice when they called the helpline returned signed consent forms. Of these, 10 women called the helpline with early labour concerns and the remainder (24) with postnatal concerns. These women were interviewed by the researcher within three to four weeks of their initial call to the helpline.

5.4 Participants characteristics

5.4.1 Socio economic status

In the absence of the socio economic status of each caller routinely being collected by the helpline midwife the occupation of the caller was used by the researcher to determine this, using the National Statistics Socio-Economic Classification (ONS 2010). When the socioeconomic status of women was assessed, all 34 women interviewed held professional occupations, including: three teachers, a lawyer, two architects and a psychiatrist. These women received a traditional model of care delivery. In contrast, the 26 women who did not return a consent form held unskilled occupations and received a caseload model of care. There were no women classified as being unemployed or as having student status.

5.4.2 Age and ethnicity

The age range of women who were interviewed ranged from 35 to 42 years, which was similar to those who did not return a consent form. The ethnic origin of women who were interviewed varied. The majority (28) were White British women. The remainder included women from one of two ethnic backgrounds: Black African [3] and Black Caribbean [2]. One consent form was returned from a woman described as being White American. The ethnic origin of these women were also similar to those who did not return a signed consent form: White British [20], Black African [3] and Black Caribbean [2]. One woman's ethnic origin in this sample was not recorded.

5.4.3 Parity

All women interviewed were either pregnant for the first time or postnatal with one child. The gestational age range of antenatal callers was 38 to 41 weeks.

5.5 Reason for calling

Women who were interviewed (34) called the helpline with antenatal concerns that related to early labour (10, 29%) and postnatal concerns (24, 71%) which predominately related to seeking advice about the baby (table 5.8). Of the 24 postnatal calls made, over half were made within two to three days of the birth. Women who called the helpline with early labour concerns sought advice and guidance from the helpline midwife regarding actions that they should take. This is discussed in section 5.6 where the qualitative results of telephone interviews with women are described.

Table 5.8 Reasons why postnatal women called the helpline

Reason for call	Number of callers per reason	Percent
Crying baby	3	12%
Breast feeding problems	5	21%
Jaundiced baby	4	17%
Baby's stool	4	17%
Cord bleeding	3	12%
Heavy lochia	3	12%
Post coital spotting	2	8%
Total	24	100%

5.6 Results of the thematic analysis – first telephone interviews

As discussed in chapter 4 thematic analysis involves a search for themes within the data. Interview transcripts from the first telephone interviews with women, were read and re read which assisted in the identification of themes (Rice & Ezzy1999). This process began with code development which involved the examination of data for the identification of themes that adequately reflected the data. Six themes emerged from the callers' interview transcripts. Themes identified were: 'knowledgeable midwife', 'satisfaction associated with the advice given' and an 'accessible, equitable service'. Themes identified which directly related to the health belief model were: 'trigger for health seeking', 'accepting advice has perceived benefits' and 'belief in self to self care'. Table 5.10 presents an example of the final stages of the analysis process where themes from interview transcripts were identified.

Table 5.10 Final stages of thematic analysis

An example of the final stages of theme development		
The most frequently repeated words and phrases used by women during the interview	Codes applied	Themes
“Knowledgeable because she asks lots of questions” “Questions and knowledge” “Expert, knowledge base” “Expertise of the midwife” “Knowledgeable midwife” “Credible advice because of knowledge”	A	Theme 1 Knowledgeable midwife
“Satisfied because advice reassuring” “Belief in advice given so satisfied” “Satisfied because advice given worked” “Satisfied with advice” “Confidence in advice given” “Satisfied because advice given”	B	Theme 2 Satisfaction associated with the advice given
“Access to helpline wasn’t a problem” “Not open for long enough” “Equity” “No access at weekends or holidays” “Easy to access for some” “No access at night” “Not accessible for all”	C	Theme 3 Accessible, equitable service
Themes Association with the health belief model		
“Problem so called the helpline” “Worried so called the helpline” “Concerned so called the helpline” Called because: “feeling ill”, “feeling unwell”, “something wrong with baby”, “baby not moving”, “baby not right”, “bleeding”, “something not right”, “had symptoms/concern”, “severe pain”, “felt susceptible”	D	Theme 4 Trigger for health seeking
“Advice sounded credible” “Knew the advice would work” “Advice the same as the book so it worked” “Explanation of benefits if advice taken” “Advice explained well and benefits obvious” “Advice the same as what friend/internet said would work”	E	Theme 5 Accepting advice has perceived benefits
“I felt I could do it because I followed the advice as explained by midwife” “She gave me confidence to follow advice” “Empowered to follow advice” “Empowered to help myself” “Not being put down but belief that I could do it” “Not feeling stupid but belief in me” “Followed the advice”, “Encouraged to believe” “Had confidence as she made it seem easy” “Explanation good so believed I could do it” “Stayed on the phone to encourage me” Encouragement to carry out care influenced my self belief	F	Theme 6 Belief in self to self care

The following section presents thematically analysed data presented under the themes identified and based on the first telephone interviews with women who used the helpline (phase 2).

5.6.1 Theme 1: Knowledgeable midwife

The knowledge base of the helpline midwife was mentioned by nearly all of the women (33, 98%), who felt that this inspired them to believe in the advice they were offered. They felt that the helpline midwife was credible because she was knowledgeable and suggested that her responses to their queries were reflective of her years of experience. Reference was made by 29 (85%) women regarding the reassurance they felt because of the questioning approach of the midwife. The women associated the multiple questions asked by the helpline midwife about the concerns they raised as being synonymous with having an expert knowledge base. The more detailed the questions asked by the midwife, the more women related this approach to her having an expert knowledge base, as the following quotes illustrate:

“She knew what she was talking about because she asked lots of questions, not just the usual but you could kind of follow her line of thinking, so you knew she had the knowledge which made me feel confident in anything she advised really.” (C001)

“She asked lots of questions which was good really, not many people really enquire about what’s really going on they just impose something on you that in my opinion is usually wrong. You need to understand to be able to advise someone and she did just that by finding out from me what was what. She didn’t treat me like a routine case. I felt confident that her advice was right because she seemed to ask the right question” (C008).

In contrast, a few women (3, 9%) appeared to be diffident regarding the helpline midwife’s questioning approach, but they reflected that by the end of the call they felt reassured by her approach. This is illustrated in the following quote,

“At first I couldn’t understand why she asked so many questions and she didn’t just get on with telling me what to do, I think she sensed my frustrations and she explained why she needed the answers to the questions, you know I learned so much from that.

I knew that she was knowledgeable because she asked all the questions. The advice she gave was right and sensible because she just knew, you don't understand about someone's situation unless you find out and then you can make decisions to help". (C004)

5.6.2 Theme 2: Satisfaction associated with the advice given

Satisfaction was assessed by women being asked to complete an imaginary scale of 1 to 5, with 1 being very dissatisfied and 5 being very satisfied. All of the women interviewed said that they assessed the service as a 5; they were very satisfied with the telephone helpline service. When women were asked what they meant by satisfaction, there were several comments including: having immediate access to advice; feeling reassured by the advice offered; having confidence in the advice offered; having access to an expert; the advice helping to resolve the problem; and the advice being congruent with information women had read in books, leaflets and guidelines.

Several women made reference to the midwife 'knowing her stuff' because the advice she offered concurred with that in the NICE guidelines (Routine postnatal care of mothers and babies, (NICE 2006) as illustrated in the following quote,

"I was very satisfied with the service but what really impressed me and my partner was her knowledge. There was no conflicting advice that we experienced with others. She told us exactly what was in the NICE guidelines but we just needed to hear it from a professional....." (C007)

Another woman said,

"We were very confident with the advice she (the helpline midwife) gave us because she knew her stuff, you didn't get the dithering that you get with others. It's so refreshing and reassuring to speak to someone who has time to listen, ask questions that have a point to them and offer advice that makes sense and works, a true expert in our eyes" (C005).

One woman who was pregnant for the first time, referred to feeling panicked when she started to experience vaginal bleeding at 38 weeks gestation. She telephoned her community midwife but there was no response. She remembered that there was a helpline service because a sticker explaining the service was on the front of her maternity notes.

She described feeling relieved when she called the helpline and was reassured by the advice received. She emphasised the relief felt when the helpline midwife answered the telephone, as she would have called an ambulance if there had been no response. The woman expressed a sense of relief following the call that she had not needed to call the ambulance, because after explaining the onset of her symptoms it was clear that her bleed was post coital, that her pregnancy was not in any danger and her symptoms were not classed as an emergency.

Women associated feeling satisfied with the helpline with having confidence in the advice offered by the helpline midwife. All (34) women associated satisfaction with confidence in the advice received. Thirty (88%) women said that they were 'very confident' and four (12%) women said that they were 'confident' with the advice offered. One woman who called the telephone helpline because of a concern about her baby said,

"I am very satisfied with the service because she really helped me. I needed help with the baby's cord because it was bleeding. I was really scared but she (refers to the telephone helpline midwife) talked me through what to do, I know it sounds basic but..... She stayed on the telephone whilst I cleaned the cord. I felt confident that she was on the line, on loud speaker. She gave me confidence to care for my baby so yes I am satisfied with the service" (B010).

5.6.3 Theme 3: Accessible, equitable service

As described earlier, the telephone helpline service was not available over a 24hour period, and it was important to assess if women found this problematic. Although women reported that being able to access the helpline midwife at the time of making their call was reassuring, a high proportion of the women expressed concern regarding the helpline opening times being limited and unreliable access to help and advice from their allocated midwife. Twenty four women (70%) stated that they had little confidence in the midwife allocated to them for their pregnancy answering their mobile telephone, because they frequently experienced their calls being diverted to an answer phone as illustrated by the following quote.

“Yes it was ok for me but what if I had a problem in the middle of the night or even late evening, what would I do, what do other women do? You can’t always get hold of a midwife because their phones are always on divert or they just ring out or when you leave a message they never get back to you and NHS Direct can’t really help, they just say contact your midwife. It should be open ideally 24 hours but I know that’s pushing it a bit. I would say 6a.m to 11pm at night would be good” (C006)

One woman suggested that the helpline should not close but should be linked to an ‘out of hours’ midwifery service that opens between 10pm and 7am.

Three women described themselves as ‘lucky’ when calling the helpline because they needed to make the call when the helpline was open. One woman said,

“It’s not luck really, I needed help when it (the helpline) was open so I was lucky, it shouldn’t be like that really. What if I needed help at night. It’s worrying you know, it (the helpline) should be open at all times just like the hospital and NHS Direct because you can’t depend on your own midwife to answer the phone at the moment it’s (refers to the telephone helpline) just half a service” (C009)

A third of the women (33%) raised concerns regarding equity and the helpline. They felt that it favoured those who did not have paid employment because it was open during office hours when they were also at work. They stated that generally problems became apparent at the end of a busy working day when daily activities slowed down and they could relax and think about how they were feeling. They referred to discussing their concerns with their partners’ in the evening but having to wait until the helpline was open the next morning to discuss these with the midwife. The following quote illustrates this:

“I wasn’t sure my baby was moving I’d had such a busy day but at the back of mind I was a bit concerned but obviously not enough because I carried on working. I wanted to call the helpline but it wasn’t open, I told my partner and I called my midwife but I just got her answer phone, surprise, surprise so I went in to hospital. The baby was fine they just talked me through how to recognise baby movements. I called the helpline in the morning for more reassurance; she was great and talked me through how to recognise baby movements” (D001)

5.6.4 Theme 6: Trigger for health seeking

Women reported that calls to the helpline associated with a health concern were more often than not triggered by a physical or psychological symptom and/or a thought or a feeling that a problem was developing, either for them or for their babies. Women described feeling that something was wrong which heightened their perceptions of their physical or psychological state and or that of their babies. The feeling was then confirmed by a symptom, or something that triggered them to take action for example, a television programme related to childbirth, an article in the paper or a friend or relative's confirmation that the symptom(s) described by the woman did not sound 'normal'. All antenatal and postnatal women interviewed who called the helpline with a symptom could recall in detail the trigger(s) that prompted the call. Some (8, 23%) women described having a feeling that something wasn't right with the pregnancy whilst they were at work during the day. The feeling was related to a physical symptom such as a reduction of fetal movements, which they ignored or denied until they arrived home from work or during the journey from work. This is illustrated by one woman's story,

"I had lots of meetings with little time in between, so I forgot I was pregnant at times but when I remembered it was a negative thought that something wasn't right.....I knew the baby hadn't moved but then I thought that maybe it had but I didn't feel it. I thought it was dead but I was being irrational, I didn't believe that at all.....On the way home I really gave it some thought...it hadn't moved so I called the helpline" A010)

One woman who was 24 weeks pregnant described how difficult it was for her to believe her own symptoms and did not call the helpline until her symptoms were confirmed by a television programme that featured signs and symptoms of anaemia.

"I felt unwell but I didn't know how to describe it, I thought that pregnancy made you feel ill at times. I just felt unwell but thought that all pregnant women felt the same..... the television programme that I taped talked about anaemia. When I heard the symptoms I knew I had it.....That's why I called the helpline, ironically I had iron tablets but I never took them, the helpline midwife found my blood results and explained why I should take them....."C001)

All women described how before they had children, they would normally trivialise perceived health concerns and not necessarily seek help unless it was something profound but appeared to seek help more readily whilst pregnant because of their sense of responsibility for the unborn child. The following quote illustrates this,

“It’s interesting because I don’t really go to the Doctors, I sort myself out, and as a family that’s how we’ve been brought up. If I’m honest I usually just ignore things you know minor stuff like pain in my back, I wouldn’t ignore anything major but when it’s a baby something changes and you don’t ignore any symptoms minor or major you just get help you know you’re responsible for a life so you act out of responsibility as well... I’m glad I got help. I had a pain but it was nothing just pregnancy pain” (D001).

Other women described how useful the helpline midwife was at dealing with what they described as ‘irrational fears’ that were based on their own misinterpretation of symptoms. Women described that with hindsight they knew that seeking help for example, for a crying baby or because they were concerned about the baby’s stool, was over cautious. They referred to their concerns as being so profound and feeling very serious at the time that they felt compelled to seek help.

5.6.5 Theme 7: Accepting advice has perceived benefits for women with antenatal concerns

This section presents thematically analysed data from woman who called the telephone helpline with antenatal concerns and followed the advice given by the midwife because they perceived it to be of some benefit.

Most of the women (32, 94%) described the usefulness of the advice offered by the helpline midwife and referred to having believed that they would follow the advice offered because it sounded credible or the midwife sounded knowledgeable and they understood the benefits of following the advice based on the midwife's explanation. These points are illustrated by the following quotes and also support the findings reported under theme 1 in section 5.6.1. One woman who was 39 weeks pregnant and reported calling the telephone helpline because she was having contractions said,

“Yeh I felt really confident after I’d spoken to her (refers to the helpline midwife) she explained why walking around helped the baby move through the birth canal. It made sense so I did it, anything to speed things up.....Before I called (refers to the helpline) I knew that I should be walking but I didn’t really believe it. She (refers to the helpline midwife) explained it in a way that related to the situation at the time, I guess I was receptive at that point” (A008)

Another woman said,

“I really appreciated her (refers to the helpline midwife) explanation, it made me think about the positions we used, if I’m honest the bleeding frightened us to death. With hindsight it wasn’t really bleeding just a small smear spot. After the scare we probably would’ve avoided sex for a while and then continued as before but the way she explained it made us change our whole approach, it all made sense and we could see why” (D002)

The majority of women (32, 94%) talked about their negative experiences of communication with other midwives and doctors and emphasised the need to ‘know’ and ‘understand’ the benefits of the advice they were offered as a precursor for compliance with the advice. This is illustrated in the following quote:

“you follow the advice because they know best and you want the best for the baby, but she (refers to the helpline midwife) explained things and gave me so much information, not just basic stuff but she wanted me I guess, to understand all the benefits..... if you understand then you’ll do what they ask, although you do it anyway even if it’s not explained, well I would, but some wouldn’t....the others (refers to midwives and doctors), well the ones I’ve met don’t really tell you anything, they think they do, but no, not really” (D003)

Ten women called the helpline because they thought they may have been in early labour. These women reported being supported by their partners at the time of making the call. The gestational age range of these women was 38 to 40 weeks. All women were advised to self care at home and reported being advised to undertake a range of activities including; relax in the bath, mobilise, count contractions, undertake breathing exercises and eat small but frequent meals.

Only one woman reported being advised to take paracetamol. Eight of these women felt that the self care advice offered was useful and delayed their hospital admission. They emphasised the importance of having their perceptions of labour validated by the midwife and the confidence she inspired in them that encouraged them to continue labouring at home, as illustrated in the following quote,

“I was scared but just needed advice really from someone that knew, you know. She really helped me, I felt ok after I called, you just need someone to tell you that yes you’re in labour and everything’s ok. She asked lots of questions which was ok really because that made me feel as though she really understood what was going on for me....and made me feel confident. We went in about 12 hours after I called and had (mentions the baby’s name) 2 hours later” (A007).

On reflection, eight of the ten women who called the helpline with early labour concerns felt that they had made the right decision to delay hospital admission and understood the benefits of staying at home for as long as possible. They suggested that the helpline midwife reinforced the benefits of staying at home in early labour and encouraged them to do so. These views are illustrated by the following quotes,

“looking back I’m pleased that I didn’t go in early, the midwife (helpline midwife) was right, you do need to be brave though and you need support at home as well. My partner helped me but he felt better once the midwife confirmed that I was in labour and said it was ok and told us what to do to stay at home. We went in about 8 hours after we called and I had her (refers to baby) about 6 hours after that” (A008).

Another woman said

“I didn’t go in even though it hurt. The midwife told me what to do to cope, I really knew what to do, but I needed her to say it and to tell me that it was labour and not anything else. She asked lots of questions so I knew she understood what was happening. Her advice made sense because I could see the benefits. I went in about 5 hours after I called and we had the baby about 10 hours after that” (A009). In contrast, two of the ten women reported that they were not reassured by the advice offered and had attended hospital once the call had ended.

When asked why, both women alluded to feeling more confident in hospital rather than remaining at home. The following quotes, with one taken from the interviews with each of these women illustrate their concerns:

Woman one

“I just couldn’t cope, I really needed to be in (hospital) you know it’s hard when it’s your first, you don’t know what’s best. The pain was bad anyway and he (refers to her partner) just didn’t know what to do. The helpline midwife was great she advised me to have a bath and all that but I just went in because I just needed more you know, the safety of hospital just more, she (the helpline midwife) couldn’t say anything really to help me to stay home and I thought that being in hospital would get things going” (A005).

Woman two

“the helpline midwife was good but I’d tried everything she suggested I thought I’d try again once I hung up the phone but we (refers to her partner) just decided to go to hospital because we needed more. We needed the hospital back up, just in case anything went wrong and to take things to the next level...at home we couldn’t do this. I wished I had stayed at home though because I had my baby about 27 hours after I’d gone in, we just sat around when I could have been at home” (A006).

5.6.7 Accepting advice has perceived benefits for postnatal callers

This section presents thematically analysed data from woman who called the telephone helpline with postnatal concerns and followed the advice given by the midwife because they perceived it to be of some benefit.

All postnatal women interviewed (24) reported reasons for following the advice offered following the telephone consultation because they perceived it to be beneficial. The following quote from one of these women illustrates this,

“My baby just wouldn’t feed I was really distressed and couldn’t wait for the community midwife. If it wasn’t for the helpline, I would have given the baby a bottle. She told me what to do but she asked lots of questions first, it seems easy now but I just followed what she said because it made sense and I just knew it would work that’s why I did what she told me to do” (B003).

The benefits of following the advice were described by three (9%) women who called the helpline because they were worried about a bleeding umbilical cord. They described the advice offered and the reassurance they felt prior to the conclusion of the call that the advice was helpful. Other women (4, 12%) described the benefits of following the advice they received regarding concerns that their babies were constipated. This is illustrated by the following quote,

“It’s just as well I called the helpline because I was about to give my baby some brown sugar and water, I knew it wasn’t right but my gran insisted that it would work. The helpline midwife told me to just keep feeding the baby and talked about the water in breast milk and the protein..... I knew she was right because I went to a breast feeding workshop and they said the same thing.... you just need to be reminded about all this you know” (A009)

5.6.8 Theme 8 Belief in self to self care

The majority (30, 88%) of women reported that they felt confident to follow the advice offered because the midwife reassured them that they could implement the actions required. Thematic analysis showed that 34 references were made to either ‘not being put down’ or ‘not being made to feel stupid’ during a call to the helpline. A further 10 references were made to feeling empowered during a call to the helpline. Women referred to the helpline midwife as ‘inspiring’ them to feel confident in their actions to care for themselves and/or their babies. The following quote from one woman is used to illustrate this,

“The way she talked me through it (refers to early labour advice) I was scared but she was so strong and sounded so confident she (refers to the helpline midwife) just took the fear out of us, we were only having a baby and we did what she said. Labour was hard but she reminded us that we could do it, she gave us confidence, I really felt empowered.....” (A001)

Postnatal women felt confident to care for their babies because the helpline midwife requested that they undertake tasks and/or observations that they had perceived only a midwife could do. These related to assessing a baby for jaundice and caring for a cord that was bleeding. One woman referred to responding to questions from the midwife about the baby’s jaundice.

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She described feeling empowered to undertake the observations because the midwife explained the rationale behind each question and the consequences of symptoms worsening. She referred to being treated as an equal and not being made to feel inadequate (B005).

Another woman described how she and her partner felt able to handle their baby with confidence because of how the telephone helpline midwife talked them through it, as illustrated by the following quote.

“Handling a newborn baby was the most frightening thing we had ever done, you wouldn’t believe it, but neither of us (refers to her partner) had held a baby before. She (refers to the baby) cried all the time, when the community midwife came she held her and she stopped crying. I felt incompetent and I know (mentions partners name) did too, he just didn’t say it. The helpline midwife was great she taught me about babies sensing nervous holds; she taught me how to hold and comfort my baby and all that. I know it sounds trivial now when I think about it, but yeh she helped me believe that I could do it and I did” (B001)

5.7 Second Telephone Interviews

This section presents the results of thematically analysed interview transcripts from interviews undertaken with women who called the telephone helpline on more than one occasion over the study period (phase 2). Only two (6%), of the 34 women who consented to take part in the study called the helpline on one more occasion. The results of the interviews with these women are now presented.

Both women said that they remained very satisfied with the service and confident with the advice offered at the conclusion of their second call. They did not need to seek further advice from other health professionals or friends after the conclusion of the call.

Both women were six to eight weeks postnatal at the time of the interview. One woman (F001) was three days postnatal when she called the helpline for the second time. Her first call was made antenatally. She called the helpline because she had not received a visit from the community midwife since leaving hospital.

The woman chose to call the helpline because she felt confident that the helpline midwife would assist her, based on her positive experience of making a call to the helpline when she was pregnant. This woman said,

“I called (name of the helpline midwife) immediately because she was great the first time when I was pregnant and she solved my problems, well I did following her advice. I had pain then and she helped me so I knew that she would sort things out this time and she did, she called me back and told me when the community midwife would visit, in fact she (the community midwife) came a few hours later. I think this service (refers to the telephone helpline) should be there all the time you know open all hours, you feel so secure knowing that there’s someone you can call, who you know is there and knows what they’re doing” (F001)

The second woman who was interviewed (F002), called the helpline when she was four days postnatal because she was worried about her baby’s colour. She described this as being yellow and telephoned the helpline because she needed an urgent response, and wanted to speak to someone whom she knew would answer her questions. She wanted reassurance quickly, and she did not want to wait for the community midwife. This woman said,

“I panicked and thought of the helpline, she (refers to the helpline midwife) was great before you don’t feel like a nuisance or anything, she took time, not like the hospital staff who are always rushing. I knew she’d pick up (refers to the telephone) and I knew she’d help like she did last time; I didn’t need to get help from anywhere else because she helped. So that was last time, this time, she asked lots of questions and got me really thinking, she knew what she was talking about because she asked the questions and explained them to me.....He (refers to her baby) was fine, he was feeding and moving, he was alert and all that. I learned a lot about jaundice that day... I was ok after the call; she (refers to the helpline midwife)” (F002).

5.8 Phase Three

The results based on data collected during phase three of the study, describe the views of staff regarding the role of the helpline in areas of care provision that traditionally received a high number of calls from women (ADU, HBC and the Community Office). Findings meet objective four of this study. The response rate and the designation of staff interviewed are described initially, followed by the results of thematic analysis.

Quotations have been elected to illustrate themes where relevant.

5.8.1 Response rate and profile of interviewees

All staff (11) invited to take part in an interview returned signed consent forms and were interviewed by the researcher. These included; two Matrons who jointly managed postnatal and community services; one Consultant Midwife who managed and led the ADU, one Ward Clerk who worked on the HBC, one Community Clerk who worked in the Community Office and six Community Midwives. All staff worked at the study site for a minimum of three years prior to the implementation of the telephone helpline service.

Four themes emerged from the interview transcripts and were identified as: ‘impact of the telephone helpline on the maternity workload’: ‘improved services’, ‘the helpline service supports midwifery care’ and; ‘accessible, equitable service’. Table 5.10 presents an example of the final stages of the analysis process.

Table 5.10 An example of the final stages of theme development

An example of the final stages of theme development		
The most frequently repeated words and phrases used by staff during interview	Code applied	Themes
“It reduces workload on ADU and in the community office” “reduces the number of women not in labour on the birth centre” “You are not interrupted all the time to answer the phone” “You answer the phone less” “You have more time to focus on patient care” “Creates efficient ways of working” “Get results quick” “Drive to destination without pulling over to answer phone” “More time to get on with your hands on clinical job” “when it’s closed the workload for the whole unit increases”	A	Theme 1 Impact of the telephone helpline on the maternity workload
“Antenatal clinics don’t over run so women don’t wait to be seen” “I get more visits done as I get few calls” “You feel less stressed because the clinic runs smoothly” “Get quick answers to clinical queries, so I don’t waste time searching for the information” “Women have back up service” “The telephone helpline meets the needs of women” “Women say that it’s a good service” “ clinic consultations are better because you don’t have to wait to get results” “Women don’t get lost in the system” “Questions answered by making a quick call” “work more focused because you are not interrupted by the phone”	B	Theme 2 Improved services

The most frequently repeated words and phrases used by staff during interview	Code applied	Themes
“Get advice on how to interpret some results” “Decisions made are validated by telephone helpline” “Support to make difficult decisions” “Direct access to advice about a patient” “patients are directed to be in the right place to receive care” “We don’t get women turning up for minor things anymore because they get help from the helpline” “women get answers to their minor problems so staff spend less time dealing with complex care”	C	Theme 3 The helpline service supports midwifery care
“Not open for long enough” “No equity of access due to limited opening times” “No service at weekends and outside office hours during the week so women are unsupported” “Favours women who don’t work” “Women are disadvantaged at weekends and at night” “there’s no equity for women who have a question at night or at weekends”	D	Theme 4 Accessible, equitable service

The following section presents thematically analysed data that are presented under the themes identified from one to one interviews with staff who worked at the study site (phase 3).

5.8.2 Theme 1 Impact of the telephone helpline on the maternity workload

All midwives referred to the positive impact the telephone helpline had had on their workload. Managers and the Consultant Midwife referred to the Antenatal ADU as taking fewer calls since the implementation of the telephone helpline when the line was open. When prompted to share data to support this claim, this was not available but they referred anecdotally to noticing a marked increase in the number of calls on occasions when the telephone helpline was closed. One manager stated that staff complained about the disruption to clinical work due to the number of telephone calls received when the telephone helpline was closed. The Consultant Midwife who worked clinically on the ADU, referred to the staff working in that area as being less distracted by the telephone ringing as a result of fewer calls when the telephone helpline was open. This point is illustrated by the following quote,

“It (refers to the telephone helpline) really has made a difference to the workload on the ADU because we don’t have to stop clinical care to answer the phone, which is really distracting because you interrupt your care of a woman to sort another problem on the phone. I think it’s unfair on the woman you’re caring for.... yes I was discussing this with the staff on ADU and we think that our work load has reduced because we don’t have to cater for the walk ins (refers to patients) you know the ones that have a cough or minor concerns that the helpline midwife can sort over the phone” (Consultant Midwife).

The consultant midwife observed a difference in the reasons why women attended the ADU when the telephone helpline was open and when it was closed. She referred to some women attending the ADU for inappropriate reasons when the telephone helpline was closed and when prompted she described these as:

“little concerns like, an aching ankle or backache, one woman turned up with toothache”

Managers and the consultant midwife described the telephone helpline as a service that guided women to access the right services at the right time, thereby ensuring that the appropriate care was provided. One manager who managed the community and postnatal ward, described the telephone helpline as,

“a service that creates efficiencies by helping women to sort the minor things out at home themselves and sign post the at risk cases to hospital services, which reduces the workload at the maternity unit”

Similarly the other manager referred to the helpline as impacting on the maternity workload by reducing the number of ‘category x’ women, who were women who would seek reassurance by attending the hospital birth centre for perceived early labour, but would be assessed as not being in labour and sent home or to the antenatal ward. The following two quotes from managers have been selected to illustrate this point,

“I think the telephone helpline has really helped reduce the workload on the labour ward, because the X category women don’t turn up on the labour ward as often as they used to before the telephone helpline started because (mentions the name of the telephone helpline midwife), tells them what to do at home so they only turn up, well a lot of them anyway, turn up in established labour” (Matron).

Another manager said,

“Before the telephone helpline category X women were assessed and then sent home which wasted their time and ours. The midwives on the labour ward have more time, now the telephone helpline is in place, to provide care for women that are in established labour which is great” (Community and postnatal ward manager).

The impact of the telephone helpline on workload was also experienced by community midwives (6), who associated the availability of the helpline with a reduction in the number of calls they received during their working day. This subsequently created efficient practices in other areas of their work. The following quote has been selected to illustrate this point,

“Because the telephone helpline takes most of the calls I used to get from women, I can drive to each visit without having to pull over to answer the phone and I get all my visits done. Honestly, before the telephone helpline, I can remember having to pull over whilst driving to answer queries from women, it was awful because it slowed me down and I couldn’t get all my visits done”

5.8.3 Theme 2, improved services

All staff interviewed talked about the difference that the helpline had made to their respective work areas. All of the community midwives interviewed (6), referred to the helpline as a ‘back up’ service and reminisced about work practices prior to the implementation of the helpline, where they frequently advised women to go to hospital to be checked because they didn’t have time to deal with their concerns over the telephone. These points are illustrated by the following quotes,

“When women called me before the telephone helpline was in place I was always so busy that I didn’t take the time to really listen to women when they described their problems, so I sent them in to the DAU or the HBC so that they could be assessed properly. Now the telephone helpline midwife sorts all their problems so the ADU and HBC get women who really need to be there” (Community Midwife)

“Every time the phone rang my heart sank if I’m being honest, it was all too much, I just couldn’t deal with all the telephone queries from women and all their problems and run a clinic at the same time. Since the phone line has been running my phone doesn’t ring as much and I feel less stressed in clinic, it’s not just me, other midwives will tell you the same thing” (Community Midwife)

Improved services were also noted by ward clerks working in the HBC (1) and the Community office (1). They described their work experience prior to the opening of the helpline as being ‘hectic’ and ‘pressured’.

They shared their experiences of answering fewer calls since the helpline was implemented and described their work experience as being more efficient because they spent less time answering the telephone. They related the efficiency of their work with improvements to maternity services. These points are illustrated by the following quotes:

“well before the helpline we would get a lot of calls about clinical stuff you know so in that way the helpline is good for us because we can’t answer clinical questions like about the baby and stuff like that, so it’s been quite good for us. We still get calls like that sometimes but not like before so it’s (refers to maternity services) been improved quite a lot in that way....We get about 50% less calls from women who are asking about their babies, you know what I mean, because the telephone was crazy before the helpline I’m telling you, now we get less, we still get calls like that sometimes but not like before it’s now better and improved, we can do our other work better which means it’s win, win for the service” (Clerical assistant Community Office).

The other clerical assistant said,

“It’s helped, we used to get 20 calls in the mornings, we don’t get that any more, but when (refers to the helpline midwife) is on holiday we know about it, every two minutes someone rings and you would have to find a midwife. Now we call on the midwives less so that they can do their work better without being interrupted and makes the service better. I know it’s made our job a little bit easier because we can get on with our work better instead of spending time finding a midwife to speak to a woman” (Clerical assistant HBC)

Improved services were also noted by the two managers and the Consultant Midwife. Several references were made to the helpline acting as a safety net for women who may miss appointments or for midwives who needed to discuss their clinical decisions. The managers referred to the helpline as improving the efficiency of obtaining blood results. The following two quotes from managers are used to illustrate their views regarding improvement to services:

“Women definitely get a better service because they have direct quick access to the midwife to deal with their queries... (mentions the name of the helpline midwife) is a very experienced band 7, she’s developed over the years and is more experienced now more than when she first started. its an art to be able to do this kind of work because you’re providing care over the phone, but she helps our women to go to the right place at the right time to get help, so all in all its a win, win for improving services” (Community/postnatal manager)

Another manager said,

“you do see the difference in all areas; everyone can get on with their day to day work without being interrupted. When the helpline isn’t operational when (mentions the name of the midwife helpline) is on holiday we don’t have the resources to replace her and yeah calls go to all other areas so the improvement isn’t consistent” (Community/postnatal manager)

The majority of community midwives described how they handled calls when they were providing direct clinical care when the telephone helpline service was closed. They referred to practicing defensively when they responded to calls from women during these times, by asking women to attend the DAU or the HBC. They practiced in this way because they did not feel that they had enough time to make clinical decision over the telephone. The following quote has been selected to illustrate these points,

“I think the helpline helps the midwives to give better care, I mean when you’re concentrating on your work like looking after someone with complications and you have to take a call we have to stop what we’re doing to deal with it.... sometimes the client (person making the call) suffers because in a hurry we give, not wrong advice, but just say come in to a woman with tummy pain when it could be something the woman could deal with it at home so we may give inappropriate advice” The helpline relieves stress and pressure on the clinical areas it’s there in any situation when women or midwives don’t know where to turn, (Community midwife).

5.8.4. Theme 2, Accessible, equitable service

When asked about the opening times of the telephone helpline the Matrons, the Consultant Midwife and all the Community Midwives, described the service as being inequitable because it was accessible to only women who called during office hours. Reference was made to improving the service by enabling greater access through extended opening times. These points are illustrated by the following quotes:

“We need to extend the hours particularly at evenings and weekends. At the moment we have the day assessment unit open until 7pm. Running the helpline till after the day assessment unit closes, maybe until 10 or 11pm would help, at least the services would be available for longer” (Community/postnatal manager)

To improve access to the helpline the Consultant Midwife and four of the Community Midwives suggested that additional staff were required to run the helpline, with a rota system that covered late and early shifts, as the following quote illustrates,

“we need to make the service accessible for all women at any time of day or night, in that way we won’t disadvantage anyone. If we had two or three midwives running the helpline on a rota systems then this would cover annual leave, study and all that. The service is good but embarrassing if you see what I mean because we don’t have the resources to provide a 24/7 service” (Consultant Midwife)

Similar concerns regarding inequitable access to the telephone helpline, due to limited opening times were raised by the Matrons, who also referred to developing the service by increasing staff numbers. They referred to the limited opening times of the helpline as reducing access choices for women and suggested that this did not comply with government policy, Maternity Matters (DoH 2007). The following quote has been selected to illustrate this point,

“we need to use the choice agenda; you know maternity matters to support the need to extend the opening times. We created access choices for women by opening the helpline but we limit it. Surely improving access particularly for vulnerable women is important so this should be our argument for resources” (Consultant Midwife)

5.8.5 Theme 4, the helpline service supports midwifery care

All community midwives referred to the helpline service as supporting midwifery care and being a resource for midwives as well as pregnant and postnatal women. They referred to this level of support as being synonymous with a midwifery clinical advice service, to which they had direct access for queries, as the following quote illustrates.

“It’s like having a buddy, you can ring the helpline and get a second opinion to support your care, it really helps you to be confident with your decisions when things are difficult”
(community midwife)

All Community midwives described the level of support provided by the helpline midwife, which was perceived as being ‘pastoral support’ for some and a ‘confidence booster’ for others. They called the helpline to: seek validation of their actions when making difficult clinical decisions, guidance regarding care pathways, to seek the results of investigative test results, for clarity regarding actions following abnormal blood results and a second opinion regarding diagnosis and decision making. The following quote has been selected to illustrate this:

“when you’re not sure about something there is no one to ask, you feel stupid sometimes because there is no support in the clinic it’s down to you really. The helpline really helps here because (names the helpline midwife) is fantastic she really supports me and others she is confident more than she was when it (the helpline) first opened, without the helpline I would struggle. I’m not saying that I don’t give good care but my care is improved you know.
(Community Midwife).

All community midwives referred to the efficiency of obtaining the results of investigative test results by ringing the helpline midwife. They described their experiences of calling the laboratory for these as ‘time wasting’ and ‘inefficient’ because of the length of time it took to get through to the laboratory. Staff stated that community clinics were not resourced with electronic access to the results reporting system at the study site and therefore they either wasted time by being held in a laboratory telephone queue or called the helpline and received the information immediately. Staff also reported asking the woman to call the helpline for results in preparation for the next appointment.

The following quote by one midwife illustrates this,

“I just ring the helpline for blood results it’s quick and easy and she (the helpline midwife) doesn’t mind it makes my clinic run better. We all do it because we don’t have time to sit on the phone for 10 minutes waiting for the lab to pick up; we only have 20 minute appointment slots. Women are also encouraged to ring the helpline for results so that they are ready for the next appointment which also saves time” (Community midwife).

5.9 Summary

The findings of the prospective cohort data and the thematic analysis of qualitative data have been presented for each study phase. Descriptive statistics and non parametric tests have enabled conclusions to be drawn about use of the helpline and associations with particular maternal and obstetric characteristics. Women used the maternity telephone helpline for antenatal, labour and postnatal concerns, with reasons for calls ranging from clinical queries to requests for information regarding appointments, hospital processes and systems.

Thematic analysis enabled the identification of themes regarding the experiences of women and clinical staff. The constructs of the HBM assisted in identifying the reasons for health and advice seeking. Women were very satisfied with the helpline service and had confidence in the advice they received at the conclusion of the call. They reported having less confidence in accessing their named midwife and felt empowered by the communication skills, knowledge and expertise of the helpline midwife in solving their concerns. Self care advice offered by the telephone helpline midwife was reported as resolving women’s concerns and in some cases, had prevented unscheduled appointments or hospital admissions. Managers, midwives and ward clerks reported that the telephone helpline service reduced calls to areas that received high call volumes prior to its implementation and enabled staff to work efficiently when the helpline was open. The helpline service was predominantly used by staff to support clinical decision making, and retrieve the results of investigative test. The increase in workload when the helpline was closed and the perceived limited opening times was a cause of concern for women who used the service and staff who worked at the study site. The implications of the findings of this study are discussed in the following chapter.

CHAPTER 6

DISCUSSION

6.0. Introduction

Maternity telephone helplines have been implemented in some UK NHS maternity units in an effort to contribute to productivity and efficiency at a time when birth rates are increasing and there is a requirement for the NHS as a whole to make efficiency savings (DH 2010). Some maternity services have introduced a specific telephone service for women who may be in early labour (Spiby 2006, Cheyne et al 2007, Kennedy 2007, Cherry et al 2009) and others have introduced a dedicated helpline available for callers regardless of the stage of pregnancy, alongside routine care provision (Appleby 2006, Team Hackney et al 2008). The telephone helpline at the study site aimed to provide support and advice to pregnant and postnatal women who were booked with the unit for their maternity care.

Evidence to inform the potential benefits of maternity telephone helplines introduced alongside routine care provision is limited. At the time of undertaking this study there was a dearth of evidence regarding the perceptual, cognitive and social factors that may influence a woman's decision to call a maternity telephone helpline and how she acted on advice received. Furthermore, whether the advice offered by a telephone helpline midwife could reduce unscheduled appointments or hospital admissions, or if a helpline introduced as part of routine service provision could impact on the role of the clinical team was not fully explored.

This study explored the use and impact of a telephone helpline from the perspective of women who called the helpline, the perceptions of clinical staff at the study site who provided care in the Antenatal Day Unit (ADU), Hospital Birth Centre (HBC) and the Community Office, and the ancillary staff who provided administrative and clerical support to those areas. The study also explored the health seeking behaviour of women offered self care advice by the helpline midwife. To achieve the aims and objectives, a case study design was used and qualitative and quantitative data collected over three study phases. Phase one was a service evaluation that involved collating routine data using a prospective cohort of callers to assess the reasons for all calls made during a one month period and to develop a profile of the callers'. Data collected during phase one assisted in meeting objectives one and

two of this study. Phase two involved telephone interviews with women identified from phase one as receiving self care advice and assisted in meeting objectives two and three.

Phase three involved interviewing health professionals and clerical assistants leading, managing and/or working in the clinical areas of interest at the study site, who had been in post prior to and after implementation of the telephone helpline service and assisted in meeting objective four.

The results of the study show that aims and objectives were achieved and the findings have generated new knowledge regarding use of a helpline from the woman's perspective and staff who work at the study site. This study makes a unique contribution to the body of knowledge regarding self care advice offered by a telephone helpline midwife regarding antenatal and postnatal concerns that appear to have solved the callers' concern(s) and avoided an unscheduled appointment, hospital admission or a home visit by a community midwife.

This chapter discusses the study findings with reference to the study objectives. Reference to relevant literature will set the findings in context and explain potential reasons for them. Implications for the organisation and delivery of maternity services and areas which require further consideration will also be explored. The appropriateness of the study design and methodology in meeting the study aims and objectives are discussed, as are the validity and reliability of study findings in relation to their generalisability and limitations. As phase one of data collection informed phase two and phase three explored the phenomenon of interest from the staff perspective, it is meaningful that the results from all three phases are discussed together where relevant.

6.1 Reasons for calling the helpline

At the outset of planning this study, it was anticipated that the most frequent reasons for calling the helpline would relate to a woman's concerns about early labour onset or aspects of postnatal health and well-being. This was a plausible expectation because the planned number of antenatal contacts recommended by the National Institute for Health and Clinical Excellence (NICE) antenatal care guidelines suggests that women should receive regular contact with a health professional (NICE 2008). However, the three most frequently cited reasons for calling the helpline were: to obtain the results of investigative tests, to make general enquiries and to clarify appointment times including questions about when the community midwife would visit. These are now discussed.

6.1.1 Obtaining the results of routine investigative tests

The most frequent reason for women calling the helpline in phase one was to obtain results for routine investigative tests including blood and urine results, with under half of calls made falling within this category. This finding suggests that the helpline played a key role in this aspect of care, although women should have received the results of investigative tests from their named midwife at routine scheduled antenatal appointments (Study Site 2008d). The reasons why women used the helpline in this way was not recorded on the caller proformas used at the study site. However, data obtained from phase three (interviews with midwives), identified barriers that prevented midwives adhering to routine systems and processes for obtaining results of investigative tests. The system that midwives should have used was considered to be inefficient as they frequently spent time during a routine twenty minute antenatal consultation obtaining results over the telephone from laboratory services, as they did not have electronic access to the result reporting systems provided at the study site. As midwives would be frequently held in a call waiting queue the time taken to source the results consequently reduced the time spent with the women. To save time during antenatal consultations, after they had taken investigative tests, midwives would frequently ask the women to call the telephone helpline to obtain their results in preparation for the next appointment.

Calls to obtain investigative test results in this way raises governance concerns regarding accurate recording of information received over the telephone, particularly as women may not be familiar with medical terminology. However, interviews with community midwives in phase three indicated that measures were in place to reduce the potential for 'misunderstanding'. These included the helpline midwife informing the woman if the results were 'normal'. The test results would be posted to the woman's home address and she would be asked to place the results in her hand held maternity notes. If a result was abnormal, the helpline midwife would make an urgent appointment for the woman to see her midwife. Whilst this system aimed to ensure that the results of investigative tests were recorded in the woman's notes, the steps involved appear labour intensive for the helpline midwife, create postage costs for the organisation and could have 'blocked' calls from women who had other concerns.

However evidence of this was not apparent from the study data as women interviewed for phase two reported that they had an immediate response from the midwife when calling the helpline and they were not held in a call waiting queue or diverted to the answer phone.

Of note, phase three data showed that midwives also called the helpline for the results of investigative test results and interestingly, they sought advice regarding interpretation of the test result from the helpline midwife. The latter point is an unexpected finding and may indicate that midwives may benefit from continuing professional development in this area.

Referral to the helpline to obtain the results of routine investigative tests is supported by the findings of a study by Team Hackney et al (2008) discussed in chapter two, although the reasons for this finding were not postulated by the authors. The other relevant study (Appleby 2006) discussed in chapter two did not identify a telephone helpline being used in this way although this may reflect the limited number of studies in this area. The current study showed that the helpline was used as a substitute for a function which should have been routinely undertaken by the laboratory service at the study site. The consequences of using the helpline in this way could potentially challenge the viability of the service because it may be perceived as an inefficient use of a midwives time. As all calls for one month were analysed during phase one of the study, findings are likely to reflect reasons for calls made to the helpline at other times. These findings may only be generalisable to the local study population as systems and processes to obtain the results of investigative tests may be peculiar to the study site.

6.1.2 Calls related to appointment queries

Half of all calls recorded for phase one for appointment concerns were requests for information on when the community midwife would undertake a postnatal home visit. This was surprising, because midwives responsible for transferring women from hospital to home at the study site were expected to complete and sign a 'postnatal transfer home check list', with the expectation that this would be supported by a discussion with the woman regarding the nature of the community midwife's visit, including when the woman could expect a first visit (Study Site 2007d). In addition, transfer home guidelines developed by the study site (Study Site 2007d) recommended that this information should be followed up and reinforced by the community midwife at the first visit to the woman's home, practice recommended in the National Institute of Clinical Excellence (NICE) routine postnatal care guidance for

women and their babies (NICE 2006). The study findings raise several concerns regarding when and how midwives communicate with women about processes for transfer from hospital, with the potential that the priority accorded to 'routine' processes may not have a sufficiently high enough profile to reassure women. Similar to the frequency of calls for investigative test results, this finding highlights that guidance in place at the study site appeared to be inefficient or poorly adhered to. The telephone helpline provided a 'back up' for callers when the system failed.

Plausible conjecture suggests that the telephone helpline at the study site may have obscured these failings and the subsequent need to review and improve and sustain these systems.

It is difficult to establish from the study findings if women had received the transfer information and needed further clarity about plans, or if they had not received the information in the first place. Lack of midwifery contact time has been cited as a reason for poor communication between a woman and her midwife (Magill-Cuerden 2006), however a study by Soltani and Dickson (2005) showed that maternal socio-economic characteristics could influence knowledge uptake. Soltani and Dickson (2005) aimed to explore women's views on routine information provided during pregnancy. Information was collected via a cross sectional survey of 700 women over a three month period in Derbyshire, England. Women belonging to professional and non professional occupations were identified from the survey participants and their responses noted in terms of their perception of information received and whether it was understood.

The findings showed that more than half of the women in the non-professional group did not understand all of the information that they were offered, whereas women in the professional groups sought clarity when they did not understand information. The researchers concluded that the information needs of women vary and should be taken into consideration when providing maternity care (Soltani and Dickinson 2005). However further evidence regarding the reasons why information was not understood would be useful in ensuring that changes to services are responsive to the needs of all women, particularly those in non professional groups.

In the current study, it was difficult to draw comparisons between professional and non professional groups regarding their understanding of information received, as this was not integral to the study aims and objectives.

However, in phase one, data on the women's socio economic status showed that just under half were in professional occupations and a third were unskilled. In phase two, as only women in a professional group consented to take part in telephone interviews comparisons cannot be drawn with the findings of Soltani and Dickinson's (2005) study. Of note, as discussed earlier, half of all calls received for phase one for appointment concerns were requests for information on when the community midwife would undertake a postnatal visit, which infers a lack of clarity with respect to information offered by the maternity unit.

Despite the number of calls to the helpline in phase one regarding requests for information on when the community midwife would visit, women in unskilled occupations did not consent to take part in phase two, therefore study findings can only reflect the perspectives of women from more advantaged backgrounds. It is difficult to understand why women in un-skilled occupations did not consent to take part in the study. Studies show that regardless of socio economic status, women may not take part in research because of practical inconvenience (Baker et al 2005, Jefferies et al 2006), or feel disempowered (Baker et al 2005). Whilst feminist writers could associate the lack of consent to partake in the current study as oppression of socio economically disadvantaged women by society, Baker et al (2005) explored the participation of women in research from an empirical perspective. They investigated the views of women from all socio economic backgrounds who participated in research and those who declined. A purposive sample of 17 postnatal women who had previously participated in research from a hospital in North West England were interviewed.

The study showed that women declined to participate in future research because they felt disempowered by the process, they did not believe that equipoise existed and it was practically inconvenient. These are interesting findings that may assist in informing future plans to increase women's participation in research. However they do not contribute to understanding why socio-economically disadvantaged women do not participate in research which is a phenomenon that may benefit from empirical inquiry.

6.1.3 Calling the helpline for general information

The findings of phase one also showed that a frequent reason for calling the helpline was for non clinical general enquiries, for example, seeking information on hospital services, including hospital tours, stem cell collection and antenatal classes.

This finding was not supported by Team Hackney et al's (2008) study, however the researchers alluded to a number of the calls received that focused on social issues, but the number and nature of these were not described.

The results of the current study suggest that women who called the helpline for non clinical reasons may have used it to source such information rather than using the routine systems and processes in place for these purposes. For example, at the study site the woman's antenatal schedule of care included in the maternal hand held records, outlined the actions and discussions that were to take place at each routine antenatal appointment, as well as information regarding the nuchal scan, hospital tour and antenatal classes (Study Site 2008d), practice recommended by the NICE antenatal care guidance (NICE 2008). This guidance advises for example, that the first antenatal contact should include a discussion about all antenatal screening; antenatal classes should be discussed at the 28 week antenatal appointment and at 34 weeks information regarding the recognition of labour should be provided (NICE 2008).

These findings show that whilst information is placed in the maternal hand held records with the expectation that women will read the information and that midwives will reinforce and discuss it at scheduled antenatal visits; women in this sample sought the information from the helpline midwife. Reasons why they chose to do this were not explored, but plausible explanations may relate to the large volume of information routinely offered to women antenatally that may not be read or understood (Soltani & Dickson 2005). Other explanations may relate to levels of literacy, with recent data suggesting that 1 in 6 people in the United Kingdom struggle to read (National Literacy Trust 2011). It is good practice for midwives to undertake knowledge checks and reinforce information at antenatal appointments and subsequent visits to ensure that information regarding current and future care and maternity systems and processes that relate to the woman's experience are understood (Dunkley-Bent 2004). If this standard was followed, the helpline may continue to be used by callers, to seek clarity regarding information already available to them, but this may be less frequent enabling the helpline midwife to focus on other calls.

The three most frequently cited reasons why calls were made to the helpline were predominantly non clinical and therefore it is questionable in a climate of financial challenges why a midwife is required to take such calls and not an unqualified member of staff such as a trained healthcare assistant.

This approach has been implemented at NHS Direct in the UK where calls are initially taken by non clinical staff who are trained to record the demographic profile of the caller and triage the call by using decision making algorithms (NHS Direct 2010). This approach to taking calls frees qualified staff to take complex calls, which is an efficient use of resources and an approach that could be considered in the maternity unit at the study site where the study findings showed that the demand for non clinical information was high.

6.2 Why Women Sought Advice

The findings from phase two, show that calls related to health concerns were associated with three of the five constructs of the health belief model developed and adapted by Rosenstock (1966, 1988), namely ‘a trigger for health seeking’, ‘taking advice has perceived benefits’ and ‘belief in self to self care’. It is worth noting that these findings are similar to the findings of other studies discussed in chapter two (Abood et al 2003, Jirojwong and MacLennan 2003, Waifer et al 2007, Shriven et al 2008) where one or more constructs of the health belief model were greater predictors for health seeking than all constructs. For clarity, the study findings are discussed within the context of these three constructs.

6.2.1 Trigger for health seeking

This study found that women called the helpline because of an internal and or external trigger and the proposition of the HBM model regarding a trigger as influencing health seeking supports this finding. Over half of the women sampled in phase 2 described how before they had children, they would normally trivialise their personal health concerns and not necessarily seek help unless their symptom was profound.

They appeared however to seek help for any symptom whilst pregnant because they felt a sense of responsibility for the unborn child. This finding suggests that having a sense of responsibility for another might be a useful factor for influencing health seeking. It may also be a useful factor to consider when planning interventions aimed at enhancing health seeking, a phenomenon that is not acknowledged by the health belief model, or explored by studies selected for review at the time of writing this thesis. Having a sense of responsibility for another as a trigger for health seeking may be unique to seeking health advice in pregnancy, or synonymous with being in any position where one is an advocate for another and is an area that may benefit from empirical inquiry to validate its influence on health seeking.

6.2.2 Taking advice has perceived benefits

This study showed that women appeared to act on health advice because of the perceived benefits of taking the advice, a finding supported by the propositions of the HBM. Whilst the sample for phase two was small which suggests that the findings may not be generalised, they may be reliably generalized to the propositions of the HBM model. On calling the helpline women described discerning whether or not the advice they were offered would be of benefit, but it appears from the study findings that the majority of women needed to understand the advice prior to complying with it.

Further findings of phase two showed that the helpline midwife played an important role in ensuring that the caller understood the advice and was informed about the benefits of following the advice, by influencing the caller's beliefs regarding the likelihood of certain outcomes. This is evidenced by the findings from phase two where women described the helpline midwife's approach to explaining the reasons why the advice was offered and the consequences of following and not following the advice. Interestingly, women referred to the advice as 'making sense' and therefore followed this despite their perceptions that it may not work. This level of dialogue indicates the importance and benefits of skilled communication, but this was not the experiences of a small sample of women in phase two, during routine face to face antenatal appointments with other health professionals. These women felt that health professionals did not present information in a way that could be understood and that met their needs. This unintentional finding was concerning and suggests that there may be educational development needs of some staff who engage in face to face consultations.

In particular this may relate to the timing of when advice is offered within a conversational sequence which is associated with the caller's acknowledgement of the advice being given (Silverman 1997). However, this finding relates to a small sample size which suggests that this finding may not be generalisable and should be viewed with caution.

Good communication is a fundamental area of midwifery practice and further research exploring communication over the telephone and during face to face consultations may generate meaningful data that may contribute to knowledge in this area. Interestingly Monaghan et al (2003) and Stewart et al's (2006), studies discussed in chapter two, investigated the expertise of the call taker and the accuracy of telephone advice respectively and drew parallel conclusions. Monaghan et al (2003), aimed to determine if the call length and outcomes of Registered Sick Children's Nurses (RSCN) and Adult Nurses (RNs) at the NHS Direct call centre in the West Midlands were different when triaging 1,281 children whose parents described their symptoms as a 'rash' or a 'fever' by telephone. The results showed that staff working at NHS Direct that were trained in paediatric specialty were more successful at managing calls from the parents of children with symptoms of rash or fever than staff who were adult nurse trained. The researchers concluded that training and development was required for staff who did not have specialist knowledge to manage calls.

This finding was however contrary to the findings of the study undertaken by Stewart et al (2006), which examined the outcome of 3,312 calls made to NHS Direct by parents of children under 16 years of age to explore if advice offered was followed, as well as the appropriateness of hospital referrals advised by NHS Direct, compared with referrals made by GPs and parents who self referred their children to hospital. Because the findings showed that a higher proportion of children referred to A&E by the GP or whose parents took the child to A&E without prior contact with NHS Direct were admitted to hospital, the researchers suggested that visual assessment plays an important role in detecting health problems in children regardless of whether the assessor is an expert or medically trained.

For the current study the findings of phase two show that a small sample of callers found the helpline advice more beneficial than face to face consultations possibly due to the conversational style.

The repeat callers to the helpline from phase two, called again during the postnatal period with new concerns because they were satisfied with the process and outcome of their previous calls to the helpline. Although this finding refers to a small sample of women, it is congruent with the propositions of the health belief model regarding previous experiences of health seeking, or disease as influencing future health seeking behaviour and therefore the findings may be generalised to the proposition of the HBM model. Satisfaction with a service influencing repeated use is not a unique finding but reinforces well established notions regarding this (Spiby et al 2007) and is supported by a study undertaken by Hughes (2003) discussed in chapter two.

6.2.3 Belief in self to self care

This study found that women followed self care advice because they believed in their ability to do so, a finding congruent with the propositions of the health belief model proposed by Rosenstock et al (1988). Women based their belief in self to care partly on being empowered by the helpline midwife which suggests that empowerment was imparted in some way during telephone consultations. Leap (2000) suggests that midwives who help women to feel empowered positively influence their self worth and confidence, but argues that power can only be taken and not given. This view suggests that an individual facilitates a situation where power can be taken by another, a quality that appears to have been expressed by the helpline midwife in this study. This is evidenced by the approach used when taking calls to the helpline. Women described lacking confidence in their own ability to care for themselves or their babies and how the helpline midwife provided guidance, support, and explanation of how to assess a situation and undertake care.

For some callers the helpline midwife carried out an assessment over the telephone as to whether self care had been undertaken successfully. This involved the midwife waiting on the telephone whilst the caller carried out the care.

This approach appeared to enhance the women's confidence to undertake the care advised and was not a finding that was supported by other studies reviewed at the time of writing this thesis. Whilst this approach achieved the desired outcome, it can be argued that the level of support required in these circumstances, required face to face consultation and would have resource implications if applied to all callers with similar clinical concerns.

It was not possible to identify from the study findings if the call was left open at the woman's request whilst the care was undertaken or whether the decision was midwife led and raises important questions regarding how much help can be realistically provided to a woman over the telephone without compromising the access and waiting times of other callers. Despite the apparent inflexibility of using a structured assessment schedule when taking calls (Spiby et al 2007) or the use of evidence based algorithms (NHS Direct 2009), a consistent structured approach to this process may have reduced what appeared to be inconsistent and potentially inequitable levels of support offered by the helpline midwife in the current study. It can be argued however, that the individual needs of the caller were met, as evidenced by women in phase two being satisfied with the helpline service. Also the study findings did not show any differences in outcome for women who carried out self care advice whilst the midwife remained on the telephone and women who undertook the same self care advice after the call had ended.

The findings raise questions regarding the likelihood of self care being successfully undertaken in the absence of empowerment. One caller to the telephone helpline in the current study described being made to feel 'incompetent' by the community midwife to care for her baby during a face to face consultation, but empowered to do so following a telephone consultation with the helpline midwife, where self care was successfully undertaken after the call had ended. Not feeling treated as an individual with respect was a factor associated with dissatisfaction of a telephone helpline in Spiby et al's work (2007). For some women being sent home from the labour ward when they had perceived themselves to be in early labour was not a decision that they were happy with.

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The helpline midwife in the current study played an important role in supporting women in the transition to parenthood where empowerment appeared to be a key factor in women believing in themselves to care for their babies. The findings also suggest that other factors

may have contributed to the compliance with health advice. For example, the helpline midwife was perceived as knowledgeable when offering advice to callers. This inspired confidence in callers to comply with the advice given, which was a finding from phase two. Women associated 'knowledgeable midwife' with sounding credible, asking the right questions, being direct, sounding authoritative and offering information that was the same as published work and NICE guidelines.

The findings of this study emphasise the significance that some women placed on receiving information that was evidence based. Information and advice offered by the helpline midwife was validated by them if it was published in a book, leaflet or was integral to NICE guidance. This finding may suggest that confident communicators who validate their knowledge with credible published sources are convincing and viewed as knowledgeable by callers to the helpline. Interestingly and by way of contrast 4/34 women who were advised to stay at home in early labour in Spiby et al's (2006) study felt that they were not offered sufficient knowledge by the helpline to confidently stay at home and self care and they reported feeling that the information was brief and their needs were not met.

Belief in self to self care was also supported by Garcia & Mann's (2003) work, which was also described earlier in chapter two. This study tested the utility of three social cognitive models including the health belief model with and without self efficacy, with a view to predicting intentions to engage in two different health behaviours, resisting dieting and performing breast self examination. A convenience sample of 159 female undergraduates answered a series of questions that related to the constructs of the model. The findings showed that the health belief model with self efficacy was a better predictor of intentions to resist dieting than models that did not include this construct. By way of contrast, self efficacy in the current study as discussed earlier was influenced by the caller feeling empowered by the helpline midwife, which is further supported by the proposition of the HBM that self efficacy increases the likelihood of action.

The findings of the current study show that constructs of the Health Belief Model: namely a trigger for health seeking' and 'taking advice has perceived benefits' play a role in understanding why health advice is sought. The 'self efficacy' construct, was only found to influence the uptake of health advice when associated with empowerment. This is an interesting finding that is not supported by other studies reviewed at the time of writing this thesis, but represents knowledge that may contribute to the educational preparation of telephone helpline midwives. It should be noted that the sample size of phase two is small which suggests that the findings may not be generalised beyond the study population. They may however be generalised to the propositions of the health belief model which strengthens the reliability of the study findings regarding the constructs assisting in understanding health and advice seeking and the uptake of health advice.

6.3 The Outcome of Self Care Advice

Exploring the type of self care advice offered to women was important to enable an understanding of: the types of self care that could be offered over the telephone, the callers' perspective of such advice, how the caller used the self care advice, if the self care advice solved the problem and if it avoided an unscheduled appointment or the use of other health care services, which were integral to objectives two and three of this study.

The findings of phase one showed that self care advice was offered to over half of the women who called the helpline with clinical concerns and that the advice offered to women interviewed for phase two solved their concerns and avoided the use of additional health services. These results are similar to the findings of Team Hackney et al's study (2008) However, a limitation of this study was the absence of 'follow up' of callers to assess if the self care advice avoided the use of additional health services.

Cherry et al (2009) suggested from their audit of calls to a maternity telephone triage service that the experience of the helpline midwife was synonymous with making sound clinical decisions regarding self care advice. They recommended that telephone helplines should be run by experienced midwives to enable self care to be appropriately and confidently offered, which supports the findings of the current study where callers referred to the experience of the helpline midwife as synonymous with the confident way she facilitated calls.

Furthermore, confidence of the helpline midwife was associated with satisfaction in Sipby et al's (2006) work.

It is apparent from the current study that the helpline midwife supported women by empowering them to self care. Antenatal and postnatal women cited feeling empowered to care for themselves and for their babies because they felt confident in the expert knowledge of the helpline midwife and the advice she offered. This may have assisted the majority of women in phase two of the current study to self care.

The characteristics of the call taker and the impact on the process and outcome of telephone consultations were not investigated by previous studies reviewed at the time of writing this thesis. However, some studies referred to callers feeling satisfied and reassured by their call to a maternity helpline (Team Hackney et al 2008, Sipby et al 2006, IFF Research 2008). For example, Team Hackney et al's (2008) study showed that callers to the helpline found it useful because they felt satisfied with the service and reassured by the advice offered. Sipby et al's (2006) study found that satisfaction was associated with the friendliness of the helpline midwife and the confident way advice was offered.

Whilst the findings of other studies show that self care was offered (O'Cathain et al 2000, Monaghan et al 2003, Snooks et al 2009), unlike the findings of the current study, advice was not defined and how the advice was used and the potential use of additional health services to solve the initial concern(s), were not integral to the aims and objectives of these studies.

6.3.1 Self care advice supported women to remain at home in early labour

Most women interviewed for phase two felt that the self care advice offered to them by the helpline midwife assisted them to remain at home for a longer period of time whilst in early labour. On arrival to hospital they birthed their babies spontaneously within 12 hours of admission with no medical intervention.

Whilst mode of birth was not a focus for this study and study numbers were too small to be able to claim any level of causal association, it is interesting to note that delayed hospital admission for women in early labour is advantageous in enhancing the potential for normal birth. It is postulated that delayed admission reduces the need for medical intervention to accelerate the latent (early) labour phase, with evidence to support this arising from large randomised controlled trials and observational studies (McNiven et al 1998, Holmes et al

2001, Bohra et al 2003, Klein et al 2003, Spiby et al 2007, Eri et al 2011). Admission in the latent phase of labour has also been shown to result in greater intervention (Holmes et al 2001; Klein et al 2003).

In the current study, early labour self care advice offered by the helpline midwife included encouraging women to have a bath, to take paracetamol and/or mobilise, advice which would be frequently offered to women who sought advice regarding admission to the labour ward. The women in the current study reported that they felt empowered to stay at home because of the support they had received, a finding not reported by previous studies. Nolan and Smith (2010) explored women's experiences of staying at home in early labour following telephone advice from an obstetric triage unit. A convenience sample of eight women living in the West Midlands region participated in semi structured interviews one month after their babies were born.

The findings showed that women lacked confidence in their own ability to interpret how they felt during labour and they did not feel reassured by a midwife over the telephone to self care at home. The findings also showed that women may have felt obliged to stay at home in early labour, rather than feeling comfortable to do so because they sensed that the advice was midwife rather than woman led. Whilst these findings were not reflective of the findings of the current study, they emphasise the importance of communication that is woman centred and that aims to empower the women. They also emphasise the importance of shared decision making where the outcome of the decision is owned by the woman, a key strength of the helpline midwife in the current study.

Other studies that explored the use of maternity telephone helplines, found that the potential to provide self care advice to women in early labour (Spiby 2007, Cheyne et al 2007), was less successful than that reported in the current study.

For example, Cheyne et al (2007) explored the views of women (22) in Scotland who used a telephone helpline designed to provide support to women in early labour and encourage them to stay at home for as long as possible after the perceived onset of labour. The results showed that despite receiving telephone advice to remain at home, with the reassurance that this would not compromise their care or labour outcome, women expressed a desire to be in hospital and lacked the confidence to cope with labour at home.

Contrary to these findings and in support of the findings of the current study, an audit undertaken of a maternity telephone helpline triage service in a maternity unit in Forth Valley Wales that aimed to reduce the number of unnecessary admissions to maternity services and in particular, the labour ward, (Kennedy 2007) had different outcomes. The audit results showed that 80 (48%) of the 167 women who called the helpline over a one month period received self care advice to stay at home, 45 of these related to early labour. The audit did not assess the use of additional resources that may have been used to solve the initial concern.

In the current study, all women who called the helpline in perceived early labour, called not only to seek advice but also to validate that they were in labour and seek reassurance that they could undertake actions that could support them to remain at home for longer. These results are contrary to the findings of other studies (Spiby et al 2006, Cheyne et al 2007).

It is plausible to suggest that helplines dedicated to supporting women in early labour (Cheyne et al 2007, Kennedy 2007, Spiby et al 2007, Cherry et al 2009) would be more specialised and expert in their approach, demonstrating outcomes that support low risk women to stay at home in early labour, but this was not the case in these studies. The current study was more successful in supporting women to stay at home in early labour. Plausible but speculative reasons for this may include how the call was managed. The findings from phase two showed that the helpline midwife in the current study did not use a structured assessment schedule unlike Spiby et al's (2006) study but offered advice to callers based on their individual needs using local policies and guidelines (GSFT 2010).

As a consequence, it appears that the information provided by the helpline midwife may have been less structured, in the absence of an assessment schedule. It should however be acknowledged that this approach may be problematic and increase the potential for conflicting advice particularly if in the future the service was expanded and more than one midwife was employed to work on the helpline at the study site. Further consideration would also need to be given to clinical governance issues regarding consistency and quality of advice. A structured telephone assessment schedule enables midwives to consistently ask appropriate questions, but there is potential for some midwives to be over-reliant on the format and limit their clinical judgement (Spiby et al 2007).

6.3.2 Self care advice rejected

Only two women in early labour in the current study were not reassured by the advice offered by the helpline midwife and attended hospital once the call had ended. Whilst these women did not appear to lack confidence in the advice given by the helpline midwife, their need for ‘something more’ in addition to self care advice was cited as the reason for attending hospital. The ‘something more’ was perceived by both women to be something that could be found in hospital. They did not associate ‘more’ with needing pain relief but felt that they needed the security of the hospital. They did not feel pressured into staying at home despite the midwife offering them self care advice.

In accordance with the propositions of the HBM, these women perceived that the benefits of attending hospital outweighed the perceived barriers of following the advice to self care at home. Women considered the home to be a barrier because the help they felt they needed could not be provided there. This small sample of women perceived that the hospital could meet their needs better than following the advice given by the helpline midwife to labour at home. Staying at home for one of these women fell below her expectations, an experience that may influence her decision to stay at home in early labour in the future (Becker 1974).

Perceived benefits of acting on health advice was not cited in other studies that explored the use of maternity telephone helplines reviewed at the time of writing this thesis, but logical conjecture suggests that women would be receptive to health advice if they perceived it to be of benefit. However this finding represents a small sample of women which suggests that logical conclusions and thus generalisable claims about this study finding cannot be made here. It is also worthy of note that ‘perceiving’ advice to be of benefit requires rational thought, which is assumed by the HBM and was found to be of some influence to women’s intention to seek health based on a trigger to act as discussed in section 6.2.1. Women in phase two referred to rational thought in relation to understanding their symptoms or concerns prior to making a decision to call the helpline.

This finding shows that some women prefer a hospital environment during labour and birth and feel safer and more confident in this environment rather than being at home. Nolan and Smith’s (2010) study, discussed earlier, suggests that women may not feel reassured by midwifery advice offered over the telephone, because they lack confidence in their ability to interpret labour feelings. However this was not a finding of the current study. Interestingly

Cheyne et al's (2007), study found that women often wanted to be in hospital 'just in case' and lacked the confidence to cope with labour at home. A combination of uncertainty, pain and anxiety influenced those women's decisions to attend hospital during early labour. Spiby et al (2007) noted that women's expectations regarding when to attend hospital in early labour was related to antenatal preparation and the level of information obtained from these classes, as well as from accessing information from the internet and the media. This however, was not a finding of the current study, which may be due to the small number of women in phase two.

In the current study, several factors appeared to influence satisfaction. These included the quality of information received, the advice offered being effective in solving a caller's concern and a caller having confidence in the advice received. Satisfaction was also associated with the information provided by the helpline midwife that could be validated by published material (discussed in section 6.2.3). These findings are similar to the findings of other studies discussed in chapter two, where satisfaction with a telephone helpline service was related to: reassurance offered (Payne et al 2001), feeling listened to (Arjan et al 2004), the nature of the response received and being treated as an individual (Spiby et al 2007).

The findings of this study have shown that there is the potential for a maternity telephone helpline to influence the appropriateness of timing of women seeking admission to hospital when in early labour. However, when considering the study findings it is important to note the small sample size and the homogenous sample; namely women who held professional occupations were married and had their husbands with them when in early labour. This sample does not reflect women who in early labour are alone at home, lone parents and women in unskilled occupation groups which suggests that the results may not be generalised beyond the study sample and should therefore be viewed within this context.

6.4 The reason calls influence call length

When the duration of calls was assessed for phase one and two, the longest calls occurred when self care advice was offered. These calls were longer than calls that involved giving routine test results or making appointments and are an unsurprising finding. A decision advising women to come in to hospital can either be made immediately, based on an assessment of the urgency of the situation, or following careful questioning and information gathering to ensure that the advice offered is appropriate to meet a woman's individual needs.

The latter approach takes time and plausibly explains the call length associated with early labour and postnatal concerns, a finding supported by Spiby et al's (2006) study which also found that women who had shorter calls were more likely to be dissatisfied than women who had longer calls, an interesting but non significant ($P=0.08$) finding.

Similar to Spiby et al's (2006) study, women in the current study associated satisfaction with the helpline midwife taking time to listen. However an important distinction between the current study and Spiby et al's (2006), findings is that the midwife taking the time to listen in the current study was not associated with shorter or longer calls, although some of these calls had the longest mean average call times and were associated with early labour concerns. Women who had shorter calls, also felt listened to. Some of these women called the helpline with post natal concerns. Feeling listened to was important for this group of women, an experience that all women should expect as a part of telephone or face to face consultations. It appears that the communication style of the helpline midwife was key to ensuring that women felt listened to and is an important finding that may inform the education and development of midwives who may choose to work on a maternity telephone helpline.

In phase one of the current study when the characteristics of the women who called the service were assessed for potential association with the call duration, call duration was longer for women who had more than one child than for women who were pregnant for the first time, despite the reason(s) for calls being similar. However this was not a statistically significant finding. A plausible explanation for this finding may have been that women in phase one, who had more than one child may have taken time to discuss their previous experiences or used their experiences to validate the reasons for their calls. This conjecture was not explored by this or other studies reviewed at the time of writing this thesis.

6.5 Telephone helpline as an accessible, equitable service

Accessible and equitable healthcare are significant in influencing the uptake of healthcare (DH 2004). Study findings that assisted in meeting objective four, identified the views of staff regarding the role of the helpline in areas of care provision that traditionally received a high number of calls from women at the study site. A theme that emerged from individual face to face interviews with staff (phase three), showed that access and equity of the telephone helpline was a concern for staff who worked at the study site. In addition the findings from phase two also highlighted similar concerns. These are now discussed.

Whilst the ethnicity of callers to the helpline was reflective of the population that used maternity services at the study site, few women below the age of 20 and no women below the age of 18 called the helpline over the study month, despite the large number of teenagers who were pregnant in the local area served by the study site in 2010. Plausible explanations for this finding may be related to the number of teenagers who receive care at the study site in relation to older mothers, or the model of care they receive. At the study site pregnant teenagers should have been allocated to the caseload model of care, which aimed to ensure that a named midwife was available to meet their needs 24 hours a day, seven days a week, thereby reducing their need to call the helpline.

It is well documented that teenage girls have poorer access to maternity services (Department for Children, Schools and Families (DCSF) & RCM 2008) and were less likely to call NHS Direct (Bibi et al 2005). A large general population study explored the use of NHS Direct England using age, gender and deprivation levels as outcome measures for 24,973 callers (Bibi et al 2005). UK census information over a one year period (2001-2) was compared with callers to NHS Direct in the West Midlands.

The findings showed that younger people used NHS Direct significantly less than other groups of the study population. The researchers recommended that further empirical work was required to understand this finding to inform a strategy to improve usage among teenagers.

Opening times of the helpline at the study site was a cause for concern for midwives who worked there and for women who used the helpline service, evidenced by the findings of phase two and three. Unequal access to maternity services for women when the helpline was closed and the increased workload for staff working in other areas at the study site (findings from phase three), were cited as reasons why the helpline opening hours should be extended. The need for extended opening times of a maternity telephone helpline service was also a finding of Team Hackney et al's (2008) study. The findings showed that women and staff were dissatisfied with the opening times that were 10a.m. to 6pm, six days a week, a service that opened for more hours than the helpline investigated for the current study.

For the current study, at times of closure, the telephone helpline answer phone message advised women to: contact the birth centre for urgent enquiries, attend the antenatal day unit or contact their named midwife. The findings from phase two showed that women felt

worried and unsafe in the anticipation that they may have needed advice when the helpline was closed and expressed dissatisfaction with back up services for example, advice to call a community midwife. They expressed little confidence in the midwife allocated to them for their pregnancy answering their mobile telephone because they frequently experienced their calls being diverted to an answer phone or diverted to another number where another answer phone message would be heard. This finding reinforced earlier findings discussed in section 6.1.2 that the telephone helpline at the study site was used as a back up service for systems that appeared to be inefficient. The helpline may have therefore potentially obscured the need to prioritise a critical review of these systems, a possible unintended consequence of the helpline service.

The system for managing calls when the telephone helpline was closed at the study site was not formalised, a finding of phase three. Women who failed to seek help by the means advised, may have been forced to call ambulance services or attend hospital with concerns that could have been managed via the helpline. One woman in the current study described her desperation to contact her midwife regarding an antenatal bleed, a potentially life threatening situation.

Having failed to do so, she expressed her relief at having immediate access to the helpline midwife who reassured her that the bleed was post coital and did not require hospital admission. The woman had planned to call ambulance services had she been unable to access the helpline. Comparisons can be drawn with the findings of Lattimer et al's (2005) study discussed in chapter two, where in the absence of immediate medical assistance via a helpline, patients called an ambulance. Using health services inappropriately has cost implications and may impact financially on other services that struggle to keep abreast of the increasing demands to provide front line care.

The opening times of the helpline at the study site have been found to be a cause for concern for the reasons discussed and consideration should be given by the study site to reviewing the opening times and formalising a system for calls to the maternity unit when the helpline is closed. A finding that requires urgent investigation by the study site is the mobile phone response times by midwives who appeared not to respond to mobile phone calls from women in phase two. Non response to calls presents a potential risk to the caller, fetus or the neonate and represents poor practice that does not reflect the midwife's code of practice (NMC 2004).

6.6 Improving services for women and midwives

One of the aims of the helpline at the study site was to provide advice to pregnant and postnatal women to improve their maternity experience. The findings from phase two and three showed that when the helpline was open, services for women who used it and for staff working at the study site was improved. These findings are now discussed.

All staff interviewed for phase three found that when the helpline was open they were able to focus on providing direct hands on clinical care without taking unscheduled telephone calls from pregnant and postnatal women. This finding is supported by Spiby et al (2006) and Kennedy's (2007) studies and as discussed in chapter two, Cherry et al (2009) also presented similar findings from an audit of a helpline aimed at reducing unnecessary admissions to the labour ward in a maternity service in Wales

Interestingly, the findings from phase three of the current study showed that when community midwives, received unscheduled calls prior to the implementation of the helpline or when the helpline was closed after implementation, they were over cautious and advised women to attend hospital without thorough assessment, or the offer of self care advice because of time pressures. Whilst this was not a finding of other studies reviewed at the time of undertaking the current study, the implications for women at the study site when the helpline was closed raises concerns about the quality of advice given to women because of a perceived lack of time. Further research that explores this area of practice with a larger cohort of midwives may be required to establish if this practice is widespread and therefore generalisable beyond the study sample.

The findings of phase three suggest that the helpline was perceived by staff as a safety net for women who did not have follow up antenatal appointments, or who had not received a home visit by a community midwife. In these circumstances women would call the helpline midwife who made the appropriate appointments. These findings are supported by the findings from phase one, where requests for appointments were the third most frequent reason for calls made to the telephone helpline. This raises safety concerns, particularly as the helpline was open for limited times and suggests that current systems at the study site for ensuring that women were provided with follow up appointments (Study Site 2008d) and/or were visited by a community midwife, were not reliable for this cohort of women. A review

of these processes at the study site may however be useful in identifying areas that need improvement.

The findings of phase three show that the impact of the helpline on maternity workload was associated with a reduction of women seen on labour ward who self-referred and who would seek reassurance for perceived early labour. These women would be assessed as not being in labour and sent home or to the antenatal ward. They would be advised to self care at home until signs and symptoms suggested that labour was established and were described as 'category x' women. This refers to a category used by Birth Rate Plus which is a tool designed to provide a methodology to assess staffing needs, first for intrapartum care and then all aspects of midwifery (Ball and Washbrook 2010).

Category X women have been identified as making a major contribution to labour-ward workload (Ball and Washbrook 2010). A reduction in 'category x' women as a direct result of implementing a telephone helpline was a perception held by midwives undertaking telephone assessments in another study (Spiby et al 2007) and a finding of Team Hackney et al's (2008) work. Despite the current study's finding regarding staff perceptions of 'category x' women, empirical data showing cause and effect was not a remit of this study. In the absence of these data, the view that a reduction of women attending the birth centre in early labour as a result of the helpline should be viewed with caution. Exploring the association between early labour advice provided by a telephone helpline and its impact on the number of women who attend labour ward has important consequences when considering the cost efficiency of a telephone helpline and therefore further research in this area would be beneficial.

General population studies have referred to improved services in relation to cost effectiveness as a result of a telephone helpline. A cost analysis of NHS direct over a one year period showed that the helpline produced savings to the NHS mainly as a result of GP consultations that were avoided (IFF research 2008).

Whilst the assessment of cost benefit was not a remit for the current study, research in this area investigating the economic impact of a maternity helpline, may assist in providing evidence regarding the viability of a telephone helpline as a model of care delivery for maternity services. This is of particular relevance to the current study as the majority of calls to the helpline over the study period were for non clinical queries that could have been taken by trained support staff.

6.6.2 The helpline service supports midwives to care

Interestingly findings from phase three, supported by findings from phase one, showed that the maternity telephone helpline service that originally aimed to provide advice to pregnant and postnatal women, also provided a support service to midwives working at the study site, a finding of Team Hackney et al's (2008) study.

In the current study the helpline was found to offer a level of support to staff working at the study site that was synonymous with a midwifery clinical advice service. This finding highlights the support needs of midwives who called the helpline to seek a second opinion regarding care, particularly when they had to make difficult decisions. This may be reflective of the needs of other midwives working within other maternity settings as midwives generally work autonomously and in some cases in the community as lone workers. In circumstances like this, they may seldom have an opportunity to discuss care provision and decision making, a finding of the current study. The telephone helpline for the current study originally designed to meet the aims of women, has unintentionally been shown to be of benefit to staff working at the study site.

This study shows that a maternity telephone helpline provides support to callers regarding: the provision of investigative test results, checking and giving appointments, general non clinical information, clinical advice and self care that appears to have avoided an unscheduled appointment or use of additional health care services. The reasons why callers seek health advice are supported by the propositions of the health belief model and have assisted in understanding why women who call a maternity telephone helpline seek advice and self care. Unexpected findings relate to the support provided by the helpline to staff who work at the study site and the dissatisfaction of some callers regarding face to face consultations during their antenatal experience. Systems, processes and guidelines at the study site appear to be under used, in need of review or poorly adhered to. Section 6.7 discusses the research design and methodology.

6.7 Limitations and critical reflections

This section discusses the appropriateness of the study design and methodology in meeting the study aims and objectives. Integral to the discussion are the researcher's reflections on feminist standpoint theory and its influence on the generation of knowledge and the HBM as

a theoretical framework for the study. To establish confidence in the study findings, the trustworthiness of the findings are also discussed within the context of the limitations.

6.7.1 The theoretical frame work and the HBM

When considering the study methodology and in keeping with the influences of the researcher's epistemology it was important to generate knowledge from the perspective of women who used the service to ensure that knowledge generated reflected their position. In addition it was also important to generate knowledge regarding the helpline from staff who worked at the study site. Feminist standpoint theory assisted in exploring the generation of knowledge from a woman's perspective and highlighted the importance of 'epistemically privileged knowledge and the importance of context in shaping and influencing health behaviour.'

The epistemology was also useful in influencing how observations about the use of a maternity telephone helpline would be made. Initially however, the researcher was philosophically challenged by how feminist epistemology could influence the generation of knowledge *from* women about services *for* women and staff at the study site, without undertaking feminist research. However gaining further insight into feminist epistemology by exploring the essays of feminist writers (Stanley & Wise 1983, Harstock 1999, Harding 2004, Hekman 2010 and Greene 2008), stressed the importance of using an appropriate research design and methodology that captured this knowledge, without the research process reinforcing the subordination of women, reducing their ability to share their experiences (Harding 2004). Measures used to reduce the chances of this occurring included: adhering to research ethical principles, reducing the potential for intrusion by undertaking telephone interviews, ensuring that the participants felt comfortable with the interview process, ensuring that the time of the interview was conducive to the participant, reinforcing key points at the start of the interview including, anonymity and the participant's right to end the interview at anytime and ensuring that the questions posed enabled women to express their experiences freely.

Selecting the HBM as a theoretical framework for this study assisted in understanding the health and advice seeking behaviour of callers to the helpline whilst acknowledging that socio economic factors had the potential to influence this behaviour. All constructs of the

HBM influenced the formulation of the data collection tools for the study and provided focus for exploring health and advice seeking.

6.7.2 Reflection on using telephone interviews as a method of data collection

The rationale for using telephone interviews was influenced by the researcher's intentions to cause minimal disruption to women's lives at a time when attendance at antenatal appointments or adjusting to parenthood were likely to be a higher priority for women. Telephone interviews' allowed women to be interviewed in the comfort of their own homes and was a method used by Team Hackney et al (2008) and Spiby et al (2007) to seek the views of callers to a maternity telephone helpline. When considering adopting telephone interviews as a data collection method, consideration was also given to the view that the response rate of telephone interviews is usually higher than that of postal questionnaires (Polit & Beck 2008). The higher the response rate, the more likely it is that bias will be eliminated in the sample, because the sample is more likely to be representative of the population (Schneider et al 2004).

A combination of approaches reported as being successful in maximising telephone response rates were used in the current study and included: a personally addressed introductory letter sent via royal mail, including participant information and consent form (Sangster 2003, Leeuw et al 2007), targeting call times (Sangster 2003), which included avoiding school run times between 8.30am and 10am and 2.30pm to 4.30pm, training to undertake interviews (Leeuw 2007) and the establishment of credentials and interview significance at the start of the interview (O Toole et al 2008). Adopting these measures ensured that all participants who consented to take part in phase two were interviewed, however the participants who did not consent to take part in the study influenced the size of the sample.

Consideration was also given to the potential of excluding women who did not have a telephone, but evidence from the Office of National Statistics showed that 79% of the adult UK population in 2008 had a mobile phone (ONS 2010), which suggested that the likelihood of women in the current study not having access to a telephone was low. Despite these considerations when choosing appropriate data collection methods and employing strategies to maximise response rates, only 34 of 60 (57%) women invited to take part in telephone interviews consented to do so. Reasons for not returning a consent form were not identified and have been discussed in section 6.1.2. However reasons may include participants needing

to take time to sign the consent form and post it to the researcher in the pre stamped envelope provided. Whilst this method of seeking consent provides an opportunity for documentary evidence regarding the participant's approval, evidence suggests that seeking prior signed consent reduces response rates (Angus et al 2003), a plausible reason for the current study's low response rate. Passive consent has been found to increase the consent rate with consent assumed if the retraction is not made (O'Toole et al 2008). The latter approach to consent was not used for the current study because the researcher wanted to avoid unnecessary burden on the woman if she did not want to take part in the telephone interview, but had not managed to retract consent.

To improve response rates, follow-up reminder phone calls were considered as this process has the potential to increase the response rate (Traina et al 2005). This approach was not undertaken because the initial agreement to receive information about the study was for postal information to be sent and not telephone follow up. A postal reminder to complete the consent form that invited women to take part in the study may have improved the response rate and is a potential limitation of the study. Postal reminders were not sent to potential participants because of the researcher's limited resources and a restricted timeframe to undertake the study.

6.7.3 Trustworthiness

Data collected from the prospective cohort and telephone and focused individual interviews enabled knowledge production from the context of lived experiences and created multiple data collection sources that aimed to support the trustworthiness of the study findings (Davies & Dodd 2002, Yin 2009). Trustworthiness was further enhanced by the accuracy checks undertaken in phase one that involved the researcher checking that the information recorded on the caller proformas were complete and accurately reflected data recorded and saved on the hospital data base. This referred predominantly to incomplete recording of the ethnic origin of callers on the helpline proforma by the helpline midwife.

Consideration was given to the quality of case study research and its ability to explore the phenomenon of interest (Yin 2009). Use of the case study was explored from three different perspectives reflected in phase one, phase two and phase three. This approach is considered to enhance the trustworthiness of the study findings because comparisons can be made (Eilbert & Lafronza 2005).

The findings of phases two and three identify areas that may benefit from a large prospective cohort design that explores the use of self care advice, particularly in relation to early labour care at home and self care advice avoiding an unscheduled appointment or the use of additional health services.

Telephone interviews with women for phase two were undertaken within three to four weeks of the initial call to the helpline when signed consent forms were returned. This may be perceived as a limitation of the study because of the reliance on the caller's ability to recall the advice received and the action taken as a result of a call to the helpline. However, this did not appear to be a problem for participants'. Similarly interviews with staff for phase three, partially relied on their recall of experiences of the helpline prior to its implementation which was two years prior to the study taking place. However, staff recalled spontaneously, without prompt, their work experiences prior to the implementation of the helpline which suggests that recall of this information was not a problem.

The proformas used for the first and second telephone interviews (phase two) and the interview schedule used for focused one to one interviews with staff (phase 3), were piloted to examine if they measured what they were designed to measure, another indicator of trustworthiness. The results of the pilot showed that no adjustments to the data collection tools were required. To avoid sensitizing the respondents to the questions and influencing the responses given, the interview proformas were piloted on a sample of women and staff who did not form part of the study population.

The sampling strategies selected to recruit to phase one and two were non probability convenience sampling for the first telephone interviews and purposive sampling of participants for the second telephone interviews and for phase three. These are approaches that sample participants through non random methods and introduce a risk of bias because the representativeness of the sample is not as guaranteed as a sample that is randomly selected (Polit and Beck 2008). However the participants for phase one were ethnically and socio-economically representative of the population that used maternity services at the study site (Lambeth PCT 2010). Conversely, participants who consented to take part in phase two held professional occupations and were not representative of the population that used maternity services at the study site, which limits the generalisability of the findings beyond the study sample because the sample was homogenous.

The advantages of using purposive sampling for this study enabled the small number of repeat callers to the helpline to be interviewed and for staff who worked in, or managed areas of high call volume prior to the implementation of the helpline to be selected. Consideration was given to randomly selecting participants from these groups, but the numbers in each area with the exception of community midwives were considerably low and experience of working at the study site prior the implementation of the helpline was significant in meeting objective four.

To further enhance the trustworthiness of the study, a schematic was developed to illustrate the operational steps taken to complete the study. This assisted with accuracy and precision of the research process and aimed to promote transferability (Yin 2009).

When considering the findings of this study it is difficult to postulate that women's views would be the same if the study was repeated as pregnancy, labour and postnatal experiences are personal and subjective. For example, a woman's confidence to self care may develop to a level where she has an increased confidence based on previous birth experiences and therefore she may not be reliant on the empowerment process to influence the uptake of health behaviour as discussed earlier. Conversely the experiences of primigravida women may be similar if this study was repeated, because pregnancy would be experienced for the first time.

The case study was explored from the perspective of individuals which is likely to change as life experiences and situations change. It is however plausible to suggest that the findings related to systems and processes at the study site would yield the same results if the study was repeated in a maternity unit that had similar challenges. These may include for example: retrieving the results of investigative test, no system for reducing the likelihood of 'category x' women attending the labour ward, unreliability of accessing a named midwife via a mobile phone and robust systems for ensuring that appointments are provided and information regarding postnatal visits by community midwives are shared and adhered to.

6.7.5 Data analysis

The development of a data analysis plan for each phase assisted in establishing what questions needed to be asked of the data to achieve the objectives of the study. For quantitative data, the data analysis plan informed the exploration of inferences that were made regarding the cases studied and the consideration of rival explanations and possibilities,

which contributed to ensuring internal validity. Where inferences were made (situations where events cannot be directly observed), to ensure internal validity, a test of significance (Kruskal Wallis test) was applied to validate inferences including for example, associations between the reasons and length of calls and call length differences between primigravida and multigravida women.

Thematic analysis was considered to be the most appropriate method for analysing the qualitative findings because the process enabled a search for themes that emerged as being important to the description of the phenomenon (Daly et al 1997). It allowed the qualitative data to be repeatedly interrogated by a process of reading and re reading the interviews transcripts and searching for themes within the data. Unlike content analysis the categories for data were not predetermined but emerged as the researcher reviewed the data. The process of thematic analysis involved allocating codes to emerging themes. With the intent of ensuring code reliability, the researcher re-read the interview transcripts and re-applied the codes several days after developing the initial codes. No modifications were made to the initial codes which suggest that they were reliable. The themes that emerged were reflective of data generated from the callers' perspective and the staff who worked at the study site which provided a different measure of the same phenomenon (Yin 2009).

Reliability could have been tested further if the codes were tested by a researcher unfamiliar with the data which may have reduced the potential for an “unintentional, unconscious “seeing” of data that researchers expect to find” (Crabtree & Miller, 1999, p. 170), and may therefore be a limitation of this study. In addition, implicit within one person’s perspective of developing a code is the potential for the code to be interpreted from the subjective experiences of the researcher. A further validity check including the participant checking the code and the theme with the data, would have been useful in ensuring reliability, but due to the limited timeframe and resources to complete this thesis this approach was not taken. Themes were identified by the researcher only and the analysis was discussed with the researcher’s supervisors which supported consistency in the method.

Whilst acknowledging the limitations , this study shows that a maternity telephone helpline: contributes to the provision of maternity care for women and their families, influences the work load of staff working at the study site and appears to avoid an unscheduled appointment or use of additional health services.

6.8 Summary

The findings of this study showed that the aims and objectives were met. Women used the maternity telephone helpline for pregnancy, labour and postnatal concerns. Concerns ranged from a clinical focus, to a request for information regarding appointments and hospital processes and systems. The three most frequently cited reasons for calling the helpline were to; obtain the results of investigative tests, clarify appointment times including questions about when the community midwife would visit and for general enquiries. The frequency of use of the telephone helpline for general information, appointment queries and the results of investigative test results, challenge the viability of the helpline as a service that requires the expertise of a qualified midwife for these types of calls. Alternative ways of running a helpline including the use of a non qualified member of staff to be the initial contact to triage calls (a model used by NHS direct) may be a model that the maternity unit at the study site may consider to improve to the efficient use of finite health resources. These and other findings including: non response to mobile phone calls when women called their named midwife and the perceived limited opening times of the helpline, raised governance concerns that should be explored further by the study site.

Findings related to satisfaction, showed that women who used the telephone helpline were very satisfied with the service and had confidence in the advice they received. They were least satisfied with what they perceived to be 'limited' opening times and raised concerns about the accessibility and equity of the service for working mothers. Concerns that were also raised by midwives in phase three.

A unique and important finding is that self care appeared to avoid an unscheduled appointment and the use of additional health services including attendance at the ADU or a visit by a community midwife. The trustworthiness of this finding is strengthened by methodology that enabled telephone interviews with women to take place within three to four weeks of their initial call to the helpline. The interviews sought their views on self care advice and the use of additional health services to solve their concerns.

The impact of the helpline on maternity workload was associated with a reduction of women seen on labour ward who self-referred and sought reassurance for perceived early labour and midwives involved in routine care taking less unscheduled calls, therefore having more time to focus on clinical care. The helpline also acted as a 'clinical advisory' service to midwives when they required support with clinical decision making. These findings suggest that working practices of staff at the study site improved in three areas that traditionally received high call volumes prior to the implementation of the helpline service. The findings are also supported by other studies discussed in chapter two regarding: telephone helplines supporting callers to self care at home (Monaghan et al 2003, Team Hackney et al 2007, Kennedy 2007, Snooks et al 2009, Cherry et al 2009); a large proportion of calls to a maternity helpline were to obtain the results of investigative test results (Team Hackney et al 2007), maternity telephone helplines being perceived to impact on the workload of staff and reducing the number of women who attend labour ward and who are not in established labour (Kennedy 2007, Spiby et al 2007, Team Hackney 2007).

By applying the most robust research methodology the aims and objectives of the study were met. Case study allowed the investigation of use of a telephone helpline using different methods of data collection. Feminist standpoint theory assisted in establishing how the observations of the helpline were constructed and the importance of capturing the standpoint of women. The HBM was an appropriate framework for the study that influenced the content of the data collection tools for phase two. The constructs of the model 'a trigger for health seeking' and 'taking advice has perceived benefits' play a role in understanding why health

advice was sought. The 'self efficacy' construct, was only found to influence the uptake of health advice when associated with empowerment.

The limitations of this study relate to the homogeneous sample of women interviewed for phase two, which suggest that the findings of this phase may not be generalised beyond the study population. It is intended that the findings of this study and in particular, the use of self care avoiding an unscheduled appointment and the use of additional health services will inform the thinking of maternity care providers and policy-makers, in England and further afield with regards to service development in this area.

The conclusion of this study and recommendations are now presented in the following chapter.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.0 Introduction

This chapter summarises the main findings of this study and presents the recommendations that are intended to inform the thoughts and plans of policy makers, providers of maternity services and for future research.

The literature reviewed in chapter two shows that maternity telephone helplines have been introduced with limited empirical evidence regarding their impact and benefit. In contrast this evidence is available for helplines for use by the general public. Telephone helplines may reduce the subsequent use of health services by individuals, immediately after the call has ended (Stewart et al 2006, Snooks et al 2009, IFF Research 2008), but evidence regarding the demand in the longer term, the outcome of advice given by the helpline, the use of self care advice and the impact of the helpline on the workforce and healthcare services was limited. (Lattimer et al 1998, Munro et al 2000, O’Cathain et al 2000, Ward 2001, Gallagher et al 2002, Appleby 2006, Spiby et al 2006, Stewart et al 2006, Team Hackney et al 2008, Cherry et al 2009, Snook et al 2009, IFF Research 2008).

Using an exploratory case study design and multiple methods of data collection that were influenced by feminist epistemology, this study explored the use and impact of a maternity telephone helpline service from the perspective of women who used the service and staff who worked at the study site in three areas that traditionally received high call volumes (Antenatal Day Unit (ADU), Birth Centre and the Community Office). The Health Belief Model (HBM) framed the study and assisted in exploring and understanding the health and advice seeking behaviour of women who called the helpline and their use of advice to care for themselves and/or their babies. Data collection took place during three different phases and included collating: prospective cohort data in phase one, seeking the views of women who used the telephone helpline through telephone interviews in phase two and one to one interviews with staff working at the study site in phase three. Phase one data were analysed using descriptive statistics that enabled inferences and conclusions to be drawn.

Qualitative data collated from phase two and three were thematically analysed, an approach that allowed a search for themes that emerged from the data.

The findings showed that the research questions and the aims and objectives presented in chapter three and four were achieved. The findings identified: the demographic, socioeconomic and cultural profile of women who called the helpline at the study site, the reasons why they called, their use of self care advice offered by the helpline midwife, the callers' satisfaction with the service and the views of staff regarding the role of the helpline. The limitations are the small sample size of phase two and three and the homogeneous sample of women interviewed for phase two, which suggests that the study findings may not be generalised beyond the study population.

The conclusions drawn from the findings showed that the ethnic and socio-economic profile of callers to the helpline was reflective of the population of women who used maternity services at the study site. Teenage girls below the age of 18 did not call the helpline, possibly because their needs were met by their designated caseload midwife. In descending order the most frequent reasons for calling the helpline were to: obtain the results of investigative tests, to make general enquiries and clarify appointment times including questions about when the community midwife would visit. These findings show that when the helpline was open it played a key role in aspects of care, where routine systems, processes or guidelines appeared to fail, or were poorly adhered to. However the frequency of use of the telephone helpline for these reasons, challenge its viability and the need for midwifery expertise to take these types of calls.

The opening times of the helpline were limited and the workload for midwives notably increased when the helpline was closed. During times of closure, routine systems for retrieving the results of investigative tests and the response to calls made by women to named midwives were unreliable and suggest that a review of these services by the study site may be required. Management of unscheduled calls received by midwives were not afforded the time required to explore concerns raised by women and is also an area that would benefit from further review by the study site.

A new and unique finding is that self care advice offered by the telephone helpline midwife appears to have avoided unscheduled hospital and GP appointments and the use of additional health services.

Self care advice has the potential to solve concern(s) raised by women antenatally, during early labour and postnatally and assist women in caring for themselves or their babies. This finding shows that self care advice offered by a maternity telephone helpline, has the potential to influence use of maternity services by callers who use the advice to care for themselves or their babies. This finding may be useful when considering maternity care provision that is aimed at improving the capacity of maternity units by managing demand.

Calls that involved giving self care advice lasted longer than calls where self care advice was not given and should be noted by maternity providers who may be planning to implement helpline service with limited workforce numbers.

The expertise and communication skills of a helpline midwife are associated with callers feeling listened to and empowered to undertake self care. Providing information that was evidence based or based on expert opinion was considered by callers' to be credible advice and reinforces the importance of midwives continually updating their professional knowledge. The confidence expressed by the helpline midwife influenced the callers' satisfaction with the service and also inspired them to follow self care advice. Confidence, midwifery expertise and empowerment expressed by the helpline midwife were associated with callers' satisfaction of the service, confidence in the advice given and following self care advice.

The HBM was a useful theoretical framework in explaining why women used a maternity telephone helpline. Three constructs were of particular relevance for explaining this behaviour: 'a trigger for health seeking', 'taking advice has perceived benefits' and self efficacy. The latter construct appeared to only influence the use of self care advice when it was associated with women feeling that they had been empowered to do so by the helpline midwife. Having a sense of responsibility for an unborn child influenced health seeking and may be a useful factor to consider when planning interventions aimed at enhancing this. However, as this remains an untested claim, investigating this phenomenon may be useful to generate knowledge in this area that may have the potential of expanding the HBM.

The telephone helpline originally designed to meet the needs of maternity service users, was of benefit to staff working at the study site. It was seen as a 'midwifery clinical advice service' where staff sought clarity about clinical decisions or interpretation of investigative test results.

When the telephone helpline was open it appeared to reduce the number of unscheduled calls received by staff and was associated with ‘freeing’ up midwifery time to focus on other areas of clinical care.

Whilst acknowledging the limitations of this study, a maternity telephone helpline contributes to the provision of maternity care. The findings add to the limited but growing evidence that a maternity telephone helpline provides a service to pregnant and postnatal women that meets their needs and solves their concerns. Self care advice provided over the telephone that reduces the need for unscheduled hospital and GP appointment(s) and the use of additional health services, makes a unique contribution to knowledge regarding the use of self care for callers to a maternity telephone helpline service. Another unique finding is the sense of feeling responsible for another (the fetus/baby) that triggered the need to seek health advice.

7.1 Recommendations

Findings have relevance to policy-makers, maternity care providers and for further research. This section presents the recommendations that are based on the findings of the study and are presented in three sections.

7.1.1 Recommendation for policy

1. Future policy documents that refer to widening participation and improving access to maternity services should consider the benefits of a maternity telephone helpline and the potential for self care reducing the demand on finite NHS resources.
2. The vision espoused in the new NHS: Modern Dependable (DH 1997) to introduce NHS Direct, should be followed by policy that considers a similar but bespoke service for maternity units, run by experienced midwives within their respective hospital environment.
3. Policy makers should consider investing in further research outlined below to progress the development of telephone helplines within maternity services.

7.1.2 Recommendations for providers of maternity care

1. Consider the implementation of a telephone helpline in maternity services designed for antenatal and postnatal women and staff

2. If a maternity telephone helpline service is implemented, methodologically robust evaluation should be planned.
3. User representatives should be involved in the evaluation to ensure that the service designed *for* users, reflects the views *of* users
4. A maternity telephone helpline requires experienced midwifery staff to take clinical calls who are confident to offer self care advice over the telephone
5. Work in collaboration with educators to develop a training programme for staff who work on the helpline that includes remote clinical assessment, communication skills and empowerment
6. Constructs of the HBM, namely a 'trigger for health seeking', 'taking advice has perceived benefits' and 'self efficacy', should form part of a proforma referred to by the call taker prior to completion of the call to assist in the uptake of advice. Opening times of the helpline should reflect the needs of the users and the maternity service

7.1.3 Further research

1. A large prospective cohort study is required that investigates the use of self care advice offered by a telephone helpline during the early labour and postnatal period and its ability to avoid an unscheduled appointment or hospital admission
2. An investigation of the ability and the capacity of midwives providing routine maternity care, to take and manage unscheduled calls from pregnant and postnatal women.
3. An investigation of the association between early labour self care advice provided by a telephone helpline and its' impact on the number of women who attend labour ward
4. An exploration of the nature of communication of telephone consultations and the association with call outcomes

7.2 Conclusion

The literature reviewed at the time of undertaking this study showed that telephone helplines were introduced nationally to enable individuals to participate in their care with the aim of reducing demand for healthcare provision from GP, A&E and other hospital services

(Lattimer 1998). A paucity of evidence suggested that telephone helplines designed for maternity services met the needs of some callers, but the full benefits of a maternity telephone helpline that is available for women regardless of the stage of pregnancy, introduced into routine maternity service provision were unknown. Furthermore, methodologically robust evidence regarding the use of self care and whether telephone helplines simply represented an 'extra step' for people to access services they would have accessed regardless of advice offered was lacking. This study showed that a maternity telephone helpline provided a service to pregnant and postnatal women that met their needs and solved their concerns, reducing the additional use of health services. The findings provide an insight into the health seeking behaviour of callers to the helpline that has the potential to influence programmes of health education within maternity services and sets a foundation for further research to expand knowledge in these areas.

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Appendix 1 A summary of the studies identified for the literature review

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Appleby 2006	To help support a maternity system that aimed to establish a more efficient way of responding to the increasing healthcare needs of women and their families.	No design detailed by authors.	Midwives	This was not described	Community midwives received appropriate calls where clinical assessment was necessary. They also spent less time advising and correcting misinformation and less time visiting women for care provision that was replaced by telephone consultation. They also reported a 50% reduction in admissions to antenatal beds in high and low risk categories No recommendations
Birdsall et al 2008	To inform the plans for future requirements of a specialist diabetic nurse led telephone helpline	Qualitative design interrogation of data base	Callers to a specialist diabetic nurse	Purposive sample of 628 people who had called the helpline	The helpline was frequently used and its impact on the diabetic specialist nurses workload was considerable. The researchers call for appropriate resource allocation to run the service No recommendations

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Bodenheimer 2002	To explore the use of self care with diabetic patients	Postal survey	Diabetic patients attending a diabetic clinic in a GP surgery	Convenience sample of 48 patients	<p>Patients self care successfully when provided with health education</p> <p>No recommendations</p>
Cherry et al 2009	To assess changes that had occurred as a result implementing triage in maternity services	Audit	Women who called the helpline	A convenience sample of 154 women	<p>Implementation of telephone triage has improved patient flow ensuring that the patient is in the right place at the right time and reduces inappropriate admissions. There are benefits at a patient, clinician and service level.</p> <p>No recommendations</p>
Cheyne et al 2007	To explore a woman's judgement and decision making in labour when given advice from the midwife over the telephone	Qualitative study using individual semi structured interviews	Pregnant women	A convenience sample of 21 pregnant women	<p>Midwifery reassurance via the telephone that labour is progressing normally is a key factor in helping women to cope at home in early labour</p> <p>Recommendations - Further research is required on women's uncertainty about staying at home in early labour</p>

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Collette et al 2006	To explore why callers contacted a telephone helpline specializing in neurological conditions and their level of satisfaction with the service.	Survey using postal questionnaires	Helpline callers	Purposive sample of 200 people who had called the helpline	<p>Callers were satisfied with the service provided.</p> <p>No recommendations</p>
Gischler et al 2008	To evaluate how often and for what reason parents of children born with severe anatomical congenital anomalies use a 24-hour telephone helpline	Observational study of telephone contacts	Parents of children	Purposive sample of 670 callers	<p>The telephone helpline provided easy access to medical and supportive care for parents of children with congenital anomalies and that nurses could effectively run the telephone helpline with paediatrician back-up.</p> <p>No recommendations</p>

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Gaines 2002	To explore the factors that influence self care	Survey using postal questionnaires	125 patients attending GP services	Convenience	Self care is successful for patients who believe they are able to undertake self care No recommendations
Godfrey et al 2011	To clarify the concept of self care	A two stage analysis of the meaning of self care	No participants	139 definitions and the evolution of self care	That self care definitions should include aspects that relate to “health, illness, disability, general outcomes, the performer of self care , the action of self care the relation to the healthcare professionals and the relation to the healthcare system No recommendations
Hughes 2003	To examine the role, acceptability, and cost effectiveness of a telephone helpline organised and run by specialist nurses	Survey using postal questionnaires	Nurses and callers to the service	Convenience sample of 87 patients	The results suggested that there was more than 95% satisfaction with all aspects of the helpline service and that 99% of callers would call the helpline again No recommendations
Kennedy 2007	Measure the impact of telephone triage services in a	Audit	Call logs of 232 women	Analysis of call logs	Telephone triage significantly reduced the numbers of women going into hospital to be seen by maternity staff and also reduced the need for admission. Midwives working at the audit site also noticed that

	maternity unit				<p>their time was freed to do other things.</p> <p>No recommendations</p>
Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Lattimer et al 1998	To determine the safety and effectiveness of nurse telephone consultation in out of hours primary care by investigating adverse events and the management of calls.	Randomized controlled trial	Nurses and GPs	Purposive sampling of 55 general practice cooperatives serving 97, 000 registered patients in the sample area	<p>Nurse telephone consultation produced substantial changes in call management, reducing overall workload of GPs by 50% while allowing callers faster access to health information and advice</p> <p>Recommendations</p> <p>Further testing of the selection and training of nurses and the decision support software is required.</p>
Lattimer et al 2005	To evaluate the integration and impact of out of hours calls to NHS Direct and GP co on the wider health care system	Observational before and after study of demand activity and trends in the use of other health services	General practice cooperatives with NHS Direct partners	Purposive sampling of 34 GP co-operatives	<p>21 of 31 sites integrated all out of hours call management, but only nine sites achieved access with a single call to NHS Direct, others had to make at least two calls and then wait to be called back by a nurse.</p> <p>No recommendations</p>

Linnell 2005	To evaluate the use of a self help manual for adult diabetic patients	Semi structured interviews	Adult patients attending a diabetic clinic	Convenience sample of 15 patients	Patients are supported to self care when their care is supported by a self help manual No recommendations
Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Monaghan et al 2003	To determine if the call length and outcomes of registered sick children's nurses and registered nurses were different when triaging children	Controlled trial without randomization	Registered sick children's nurses and registered nurses	Purposive sampling of 22 nurses	Registered sick children's nurses take less time than registered nurses to triage calls. The study highlights the need to develop evaluation research into NHS Direct and raises questions about the current capacity and capability of its data systems to support worthwhile appraisal. Recommendations Careful workforce planning should be undertaken to ensure that continuing professional development of all nurses regardless of speciality should be appropriate to meet the needs of the range of likely callers to the service.
Munro et	To quantify the impact of NHS Direct on the use of A &	Descriptive study observing trends in	Nurses and	Purposive sampling of	NHS Direct did not make a difference to the number of calls to A&E or to the ambulance services. Changes in use of the GP co-operatives

al 2000	E, ambulance, and general practitioner cooperative services	use of NHS Direct and other immediate care services	GPs	three areas in England and six nearby GP cooperatives	showed a decrease from 2% a month before the introduction of NHS Direct to 0.8% afterwards, a small but relative change No recommendations
Glasgow et al 2007	Evaluations of problem-solving skills in diabetes management using a diabetes problem solving interview approach	Semi structured interviews.	Patients registered with a healthcare facility	506 adults	Diabetes problem solving, as measured by the diabetes problem solving interview approach, is an important patient skill related to several key diabetes management variables No recommendations
The proprietary Association of Great Britain (PAGB 2009)	To explore the factors that either influenced self care for minor ailments or created barriers to obtaining care	One to one interviews and survey	Patients, GPs, nurses and pharmacists	1,317 consumers, 131 GPs, 130 nurses, 159 pharmacists and 401 patients Sampling approach not defined by researchers	Patients viewed minor ailments as lasting a brief period, GPs felt that minor ailments were appropriately managed by patients. All health professionals felt that patients needed more education to self care. Consumers likely to self care were British, female and older. Recommendations Health professionals need support to empower consumers

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
IFF Research 2008	To establish the impact of NHS Direct on primary and secondary care services and assess user satisfaction with the service	Survey and in-depth interviews	Callers to NHS Direct	4,554 calls to NHS Direct in-depth interviews with 35 health providers	90% of callers found NHS Direct efficient and helpful. 41% of callers had been advised to treat themselves at home, 95% of those who followed the advice given were satisfied with its effects Recommendations Larger scale study of health providers is required
O'Cathain et al 2000	To determine how helpful callers found the advice offered by NHS Direct staff	Postal survey	Callers to NHS Direct and nurses	Purposive sampling of 1050 NHS Direct callers	Advice offered by nurses was well received and callers were satisfied. Recommendations Further qualitative research is needed to understand callers' need for reassurance and the nature of the reassurance gained.
Snooks et al 2009	To establish the callers response to advice received from NHS direct regarding the appropriateness of the advice	Postal survey	Callers to NHS Direct	Purposive sample of 3,200 callers	The advice received was appropriate, helpful and easy to follow. Nearly half of all callers made no further contact after their call to NHS Direct Wales however where subsequent contacts were made these were made with GP's. No recommendations

Author	Purpose	Design & methods	Participants/ intervention	Sample	Key findings/recommendations
Spiby et al 2006	To determine women's views of a telephone helpline service, the views of health professionals and the impact on their work	Evaluation using interviews and questionnaires	Midwives and women who called the helpline	21 midwives and 46 women	Midwives were generally positive about the helpline as it enhanced their support provided to women. Women were satisfied with the helpline based on the nature of the responses to their calls. Dissatisfaction was associated with attending hospital based on advice received from the helpline and being sent home. No recommendations
Stewart et al 2006	To examine the outcomes of calls to NHS Direct in relation to attendance at the A&E department	An evaluation of prospective call data	Children and young adults aged <16 years areas	Convenience sample of 216 callers	The majority of callers who were advised to attend A&E did so and only 15% (71) of those were admitted. A higher proportion of patients referred to A&E by the GP or self referred without contact with NHS Direct were admitted. Recommendations More collaborative prospective studies are needed.
Team Hackney et al 2008	Evaluation of a maternity telephone helpline	An evaluation	Women who called the helpline	Convenience sample of 80 women	The majority of the calls related to clinical queries and social issues. Callers to the helpline found it useful because they felt satisfied with the service and felt reassured by the advice given

Tsay 2002	Evaluating the success of self care	Survey using postal questionnaire	85 patients attending a rheumatology clinic	Convenience sample of 85 patients	Self efficacy influences successful self care No recommendations
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Appendix 2 Call Proforma

OTHER
MAIL REC'D
MAIL CALL RET'D
WOMAN'S DETAILS:
SURNAME:
FIRST NAME
DOB
HOSPITAL N
HOME ADDRESS
POSTCODE
HOME TEL
MOBILE

ETHNICITY
OCCUPATION
CALL FROM TEL N.
RETURN CALL TEL N.

Study site logo

CALL DETAILS
CALLER NAME(if different)
RELATIONSHIP TO WOMAN
DATE: DAY
CALL START TIME
CALL END TIME

ANTENATAL
PARITY
EDD
OBSTETRIC HISTORY
MEDICAL HISTORY
NEXT APPT

POSTNATAL (date gave birth)
TYPE OF BIRTH
BIRTH LOCATION
DISCHARGE DATE
CMW VISIT RECEIVED?
DATE OF NEXT CMW VISIT
HV VISITED?

CALLERS QUESTIONS/CONCERNS

ADVICE GIVEN

REFERRED TO

FAXED GP

POSTED TO WOMAN

PHYSIO/DIABETIC/ANC REFERRAL HANDED IN

Appendix 3 Prompt sheet for the telephone helpline midwife

Study site logo



Jacqueline Dunkley-Bent
Doctoral Student

Title of study: 'How does using a maternity telephone helpline impact on women who use the service and the maternity workload? A case study design'

Prompt sheet for the telephone helpline midwife

Dear xx

As discussed, this information sheet has been designed to assist you in informing women about the telephone helpline study. Toward the end of each call received from the 5th January 2010 and for one calendar month, can you mention the following,

'Before I end the call, can I inform you about a research study that is currently being undertaken here to evaluate this service? A doctoral student from Kings College London, Jacqueline Dunkley-Bent is undertaking the study to establish the views of women and members of staff in maternity services about the telephone helpline and she would like to send you further information about the study over the next few days and invite you to participate'.

Can information be sent to you?

Please end the call in your usual way

Please highlight the number of women who object to receiving further information on the caller proforma

Thank you and kind regards

Jacqueline Dunkley-Bent
Postgraduate research student

Appendix 4 Patient participant information and consent form



Jacqueline Dunkley-Bent Doctoral Student
Professor Debra Bick academic supervisor

Title of study: 'Exploring the use of a telephone helpline and the health seeking behaviour of callers
– A case study

Research Information letter

Date:

Dear client

Re: Research to explore the use of the telephone helpline service at XXXXX

I am a midwife and a postgraduate research student at Kings College London undertaking a research study to explore women's views of the maternity helpline service at XXXX. The study is being supervised by Professor Debra Bick and Dr Joanne Fitzpatrick from the Florence Nightingale School of Nursing and Midwifery. I understand that the helpline midwife you spoke to informed you about the study and that you may be contacted by me.

As you have recently called the maternity service helpline, I am interested in your views of the service and the advice you received. In order to do this, with your permission I would like to call you and ask you a few questions about why you called the service and if the advice you received reassured you. I expect that this would take around 20 minutes. As I am also interested in why some women may call the helpline on more than one occasion, I may also wish with your permission to contact you for a second time when your baby is around 6 – 8 weeks old.

If you would like to take part in this study, I would be grateful if you could read the information leaflet that is enclosed with this letter that explains the aim of the study and why it is taking place. If after reading the information leaflet you would like to take part in the study, please return the consent form which you must sign, in the stamped addressed envelope provided, where possible within four days of receipt. If you do not wish to take part in this study please ignore this letter and you will not be contacted again by me.

Thank you for considering giving up a small amount of your valuable time to assist me with my study. Your contribution is very much appreciated. Please be assured that all information collected will be treated in confidence and no names will appear on any publications that may arise from this study. Please do not hesitate to contact me if you would like any further information on the study.

I look forward to hearing from you

With best Wishes

Jacqueline Dunkley-Bent
Postgraduate research student
Email :Jacqueline.dunkley-bent@kcl.ac.uk

Study site logo



Date:

Participant information sheet

Study title: 'How 'Exploring the use of a telephone helpline and the health seeking behaviour of callers – A case study

I would like to invite you to take part in this research study that is being undertaken as part of a doctoral programme by a research student. The following information explains how you would be involved if you would like to take part. Please feel free to show this information to others and discuss your involvement if you wish.

Purpose of the study

The purpose of the study is to evaluate the maternity telephone helpline service at XXXX that started in 2007. The study will involve establishing the views of those who use the service and the views of staff. To date little research has been conducted in the use of a helpline in maternity care.

Why have I invited you to participate?

All women who called the helpline during January 2010 will be invited to take part in the study. As you have called the helpline I would welcome your views and experiences of using the service and would like to invite you to take part in a telephone interview about the call you made to the service and what happened as a result of the call.

Women who may have used the telephone helpline on more than one occasion may be asked to take part in a second interview at six to eight weeks after the birth of the baby to understand why they used the helpline again. The results of the telephone surveys will assist in assessing the benefits of the service and inform future plans regarding the helpline.

Questions you may have

Do I have to take part?

Taking part in this research is voluntary. You may decide after reading this information sheet that you do not wish to take part in this study. You are free to withdraw from the study at any stage without reason.

What happens if I take part?

If you decide to take part in the study the details about you and the call (s) you have made to the telephone helpline will be reviewed by the researcher. The data reviewed will not be identifiable to you. In addition you will be required to answer several questions over the telephone which will take around 20 minutes. If you used the helpline on more than one occasion you may be contacted by the researcher to invite you to take part in a second telephone interview at six to eight weeks after you have had your baby. This interview should also last about 20 minutes. Information about you and the calls you have made to the telephone helpline will be available to the researcher and her research supervisors, but your name will never be used and all information will be totally confidential.

What are the possible advantages and disadvantages of taking part in the study?

Advantages –the views of those who use maternity services is very important. It is important to know if the provision of a maternity telephone helpline service; meets women's needs, can provide reassuring advice and makes more appropriate use of the woman's and the midwife's time.

Disadvantages – the study will require women who consent to take part to give around 20 minutes of their time to take part in a telephone interview. Some women may also be asked to provide an additional 20 minutes of their time if they are asked to take part in a second telephone interview.

What happens to the data collected?

Data will be stored securely and will only be accessed by the researcher and her academic supervisors. It will be retained for a period of seven years by Kings College London which is a requirement of the research ethics committee and the research development department. The data will be destroyed securely after this time.

If for any reason during the interview you express concerns about your maternity experience the researcher will offer you the contact details of the Director of Midwifery who will be able to help you further. In addition, if information is disclosed during the interview that is deemed not to be in your interest or your care needs, the researcher has a duty of care to disclose this information to the Director of Midwifery at XXX for investigation.

What happens when the research study ends?

The research findings will be included in the researcher's doctoral thesis which will be completed in October 2011. In addition, at the end of the study the results will be disseminated to maternity services at XXX. The results of the study will be submitted for publication in professional and scientific journals so that learning can be shared. You will also be emailed an executive summary of the research findings if you choose to share your email address with the researcher at the end of the telephone interview (s).

Who is funding the research?

There is no external funding for this study. Any research costs will be funded by the researcher.

Who has reviewed the study?

The study has been reviewed by an independent group known as a research ethics committee. The committee reviews all research undertaken in the NHS and aims to protect your safety, rights, wellbeing and dignity. The research is also monitored by the research and development department at the hospital where the research is being carried out.

Further information and contact details

Further information regarding this research can be obtained from;

Name of researcher: Jacqueline Dunkley-Bent, email: Jacqueline.dunkley-bent@kcl.ac.uk
Telephone No. 07958 573 836

1st Academic supervisor: Professor Debra.Bick
and chief investigator debra.bick@kcl.ac.uk, Telephone No: 0207 848 3641

2nd Academic supervisor Dr: Joanne.fitzpatrick
Joanne.fitzpatrick@kcl.ac.uk, Telephone No: 0207 848 3206

For research enquiries/advice or an independent opinion about this project undertaken within your Trust please contact Lynne Pacanowski Director of Midwifery at Guy's & St Thomas NHS Foundation Trust on 0207 1886875

Making a complaint about your involvement in the research

If you wish to make a complaint about your involvement in the research, please contact Professor Debra .Bick at Kings College London, telephone number 0207 848 3641.

Participant Consent Form

Project title: "Exploring the use of a telephone helpline and the health seeking behaviour of callers – A case study"

Researchers name: Mrs Jacqueline Dunkley-Bent

Academic Supervisors Professor Debra Bick and Dr Joanne Fitzpatrick

**Please place your
initial in each box**

I have read the participant information sheet and the nature and purpose of the research has been explained to me.

☐

I understand the purpose of the research project and my involvement in it.

☐

I understand that I may withdraw from the research project at any stage and that this will not affect me now or in the future.

☐

I understand that while information gained during the study may be published, I will not be identified and my personal details will remain confidential.

☐

I understand that direct quotations from me may be used by the researcher and form part of the final thesis or published in journals but I will not be identified.

☐

I understand that information will be tape recorded and stored on the computer of the researcher but access will be password protected and limited to the researcher and the academic supervisor. Any paper copies will be stored in a locked cupboard in the University accessed only by the researcher.
The University policy in relation to storage of data will be adhered to.

☐

I understand that I may contact the researcher if I require further information about the research and that I may contact the academic supervisor at Kings College London if I wish to make a complaint relating to my involvement in the research.

☐

I agree to take part in the study.

Signed(research participant)

Print name.....Date:.....

Name of researcher obtaining consent: Jacqueline Dunkley-Bent Date:.....2010

Contact details Jacqueline.dunkley-bent@kcl.ac.uk Telephone No. 07958 573 836

1st Academic supervisor: Professor Debra.Bick email: debra.bick@kcl.ac.uk Tel No 0207 848 3641

2nd Academic supervisor: Dr Joanne Fitzpatrick email: Joanne.fitzpatrick@kcl.ac.uk Tel:0207848 3206

Appendix 5 First telephone interview schedule

Accessing the helpline

1. Did you get through to the helpline on your first call
2. Why did you try on more than one occasion to get through to the helpline
3. How many times did you hear the answer phone message before getting through to the helpline?
4. Was the answer phone message useful?
5. How helpful did you find the answer phone message?

very helpful	Why?
helpful	Why?
slightly helpful	Why?
unhelpful	Why?
Yes	Why?
No	Why?

6. Did you find the opening times of the helpline convenient?
7. How did you hear about the helpline?

Your call

8. Describe your experiences of using the helpline
9. Did the helpline meet your expectations?
10. What was the reason for your call(s)
11. What triggered your call
12. On a scale of 1-4 with 1 being not serious and 4 being very serious, how serious was the problem that triggered your call?

	scale	
very serious	4	Why?
Moderately serious	3	Why?
Undecided	2	Why?
not serious	1	Why?

12. What advice/information were you given?
13. On a scale of 1-4 with 1 not being confident and 5 being very confident, how confident were you with the advice/information given

Very confident	4	Why?
Confident	3	Why?
slightly confident	2	Why?
not confident	1	Why?

14. Did you follow the advice? Why?
15. How confident did you feel to follow the advice? Why
16. Did the advice help? Why
17. Did the advice given solve your problem/concern? Why/whynot?
18. Did you seek further advice about your concern/problem? Why?
19. Where did you seek advice about your concern problem?

20. Did the additional advice you sought result in a health appointment /visit

21. Which health professional did you meet?

22. What was the outcome of the meeting?

23. Why did you feel the need to seek further advice?

24. On a scale of 1-5 with 1 being very dissatisfied and 5 being very satisfied, how satisfied were you with the telephone service?

	scale	
Very satisfied	5	Why?
Moderately satisfied	4	Why?
Undecided	3	Why?
Moderately dissatisfied	2	Why?
very dissatisfied	1	Why?

The future

25. Do you think that the helpline could be improved? How?

26. Would you use the helpline again

27. would you recommend the helpline to other

Appendix 6 Second telephone interview schedule

Accessing the helpline

1. How many times have you called the helpline since your first call?

Your call

2. What influenced your decision to call the helpline?
3. Describe your experiences of using the helpline
4. Did the helpline meet your expectations?
5. What was the reason for your call(s)
6. What triggered your call
7. On a scale of 1-4 with 1 being not serious and 4 being very serious, how serious was the problem that triggered your call?

	scale	
very serious	4	Why?
Moderately serious	3	Why?
Undecided	2	Why?
not serious	1	Why?

8. What advice/information were you given?
9. On a scale of 1-4 with 1 not being confident and 5 being very confident, how confident were you with the advice/information given

Very confident	4	Why?
Confident	3	Why?
slightly confident	2	Why?
not confident	1	Why?

10. Did you follow the advice? Why?
11. How confident did you feel to follow the advice? Why
12. Did the advice help? Why
13. Did the advice given solve your problem/concern? Why/whynot?
14. Did you seek further advice about your concern/problem? Why?
15. Where did you seek advice about your concern problem?
16. Did the additional advice you sought result in a health appointment /visit
17. Which health professional did you meet?
18. What was the outcome of the meeting?
19. Why did you feel the need to seek further advice?
20. On a scale of 1-5 with 1 being very dissatisfied and 5 being very satisfied, how satisfied were you with the telephone service?

	scale	
Very satisfied	5	Why?
Moderately satisfied	4	Why?
Undecided	3	Why?
Moderately dissatisfied	2	Why?
very dissatisfied	1	Why?

The future

25. Do you think that the helpline could be improved? How?
26. Would you use the helpline again? Why
27. Would you recommend the helpline to others?

Appendix 7 Staff participant information and consent form



Researcher: Jacqueline Dunkley-Bent
Doctoral Student.

Supervisors: Professor Debra Bick and Dr Jo Fitzpatrick

Title of study: 'How does using a maternity telephone helpline impact on women who use the service and the maternity workload? A case study design'

Date: 2010

Dear

Re: Research to explore the use of the telephone helpline service at XXXXX

I am a midwife and a postgraduate research student at Kings College London undertaking a research study to explore the maternity helpline service at Guy's & St Thomas NHS Foundation Trust. I am writing to you as I am interested in your views about the impact of the telephone helpline on the workload in your area following its introduction and at the current time. I would like to invite you to take part in an interview with me that will take approximately 30 minutes. I invite you to read the enclosed information leaflet that outlines the aims of the study. After reading the information, if you would like to take part in the study please return the signed consent form to me in the stamped addressed envelope provided by the 30th January 2010. If you do not wish to take part in this study please ignore this letter and accept my apologies for wasting your time.

I do hope that you will be willing to give up a small amount of your valuable time to assist me with this study. Your contribution would be very much appreciated. Please be assured that all information collected will be treated in confidence and no names will appear on any publications that may arise from this study.

With best wishes

Jacqueline Dunkley-Bent Postgraduate research student

Email :Jacqueline.dunkley-bent@kcl.ac.uk

Researcher: Jacqueline Dunkley-Bent
Doctoral Student

Supervisors: Professor Debra Bick and Dr Jo Fitzpatrick

Title of study: 'How does using a maternity telephone helpline impact on women who use the service and the maternity workload? A case study design'

Participant information sheet

I would like to invite you to take part in this research study and have provided the information below to explain how you would be involved. Please feel free to show this information to others and discuss your involvement if you wish.

Purpose of the study

The purpose of the study is to explore the use of a maternity helpline service at XXXXX from the perspective of those who use the service and staff who work in three areas that traditionally receive high call volumes: Antenatal Day Unit (ADU), Hospital Birth Centre (HBC) and the Community Office. To date little published research has been conducted in this important area of care provision in the UK maternity services. The study seeks to ascertain the views of women who use the telephone helpline by undertaking telephone interviews with them soon after their first call to the helpline and in some cases, a second interview at six to eight weeks post delivery. I also wish to interview members of the maternity workforce to seek their views regarding the role of the telephone helpline service. The study will include the analysis of call volumes made to the helpline during the study period, the outcome of calls made, repeated use of the helpline and perceptions of potential impact on the service.

Why have I invited you to participate?

As you have been identified as working in one of the areas of high call volume that I am interested in, I would welcome your views regarding the influence of the telephone helpline on your workload, on the workload of your colleagues and on women's care.

The result of the interview will assist in establishing the benefits of the telephone helpline and inform future plans regarding its development.

Questions you may have

Do I have to take part?

Taking part in this research is voluntary. You may decide after reading this information sheet that you do not wish to take part in this study. You are free to withdraw from the study at any stage without reason.

What happens if I take part?

If you decide to take part in the study you will be invited to attend for an interview with me, which I anticipate will take around 30 minutes. The interview will be arranged to take place at a time and venue convenient for you, within the hospital premises. With your permission, the interview will be audio tape recorded and later transcribed by me. Your responses will be treated in complete confidence and no names will be used.

If however information is disclosed during the interview that is deemed not to be in the clients or your colleague's interest, I have a duty of care to disclose this information to the Director of Midwifery at XXXXX for investigation.

What are the possible advantages and disadvantages of taking part in the study?

Advantages –. There is limited information on the benefits and usefulness of maternity helplines for women, information you provide will contribute to the body of knowledge in this area and future direction of this aspect of service provision.

Disadvantages – the study will require you to provide around 30 minutes of your time to be interviewed.

What happens to the data collected?

All data will be stored securely and will only be accessed by the researcher and the academic supervisors. It will be retained for a period of seven years by Kings College University which is a requirement of the research ethics committee and the research development department. The data will be destroyed securely after this time

What happens when the research study ends?

The research findings will be included in my doctoral thesis which will be completed by October 2011. In addition, at the end of the study the results will be disseminated to maternity services at XXXX. The results of the study will be submitted for publication in professional and scientific journals so that learning can be shared.

You will also be emailed an executive summary of the research findings if you choose to share your email address with me at the end of the interview.

Who is funding the research?

There is no external funding for this study. Any research costs will be funded by the researcher.

Who has reviewed the study?

The study has been reviewed by an independent group known as a research ethics committee. The committee reviews all research undertaken in the NHS and aims to protect your safety, rights, wellbeing and dignity. The research is also monitored by the research and development department at the hospital where the research is being carried out.

For research enquiries/advice or an independent opinion about this project undertaken within your Trust please contact XXX Director of Midwifery at XXXX on XXXXX

Making a complaint about your involvement in the research

If you wish to make a complaint about your involvement in the research, please contact Professor Debra.Bick at Kings College London, telephone number 0207 848 3641.

Name of researcher: Jacqueline Dunkley-Bent
Jacqueline.dunkley-bent@kcl.ac.uk
Telephone No. 07958 573 836

1st Academic supervisor: Professor Debra.Bick
debra.bick@kcl.ac.uk, Telephone No: 0207 848 3641

2nd Academic supervisor Dr: Joanne.fitzpatrick
Joanne.fitzpatrick@kcl.ac.uk, Telephone No: 0207 848 3206

For research enquiries/advice about research undertaken within your Trust please contact your local R&D department

Project title: How does using a maternity telephone helpline impact on women who use the service and the maternity workload? A case study design'

Researchers name: Jacqueline Dunkley-Bent

Academic Supervisors Professor Debra Bick and Dr Jo Fitzpatrick

**Please place your
initial in each box**

I have read the participant information sheet and the nature and purpose of the research has been explained to me.

I understand the purpose of the research project and my involvement in it.

I understand that I may withdraw from the research project at any stage and that this will not affect me now or in the future.

I understand that while information gained during the study may be published, I will not be identified and my personal details will remain confidential.

I understand that data will be tape recorded and stored on the computer of the researcher but access will be password protected and limited to the researcher and the academic supervisor. Any paper copies will be stored in a locked cupboard accessed only by the researcher. The University policy in relation to storage of data will be adhered to.

I understand that I may contact the researcher or supervisor if I require further information about the research and that I may contact the research ethics coordinators at Kings College London if I wish to make a complaint relating to my involvement in the research.

I agree to take part in the study.

Signed(research participant)

Print name.....Date:.....

Name of researcher obtaining consent: Jacqueline Dunkley-Bent Date:.....

Contact details Jacqueline.dunkley-bent@kcl.ac.uk Telephone No. 07958 573 836

1st Academic supervisor: Professor Debra.Bick email: debra.bick@kcl.ac.uk Tel No 0207 848 3641

2nd Academic supervisor: Dr Joanne.fitzpatrick email: Joanne.fitzpatrick@kcl.ac.uk Tel No 0207 848 3206

Appendix 8 Interview guide for interviews with staff

Interviewer: Jacqueline Dunkley-Bent (researcher)

Interviewee's Designation:_____

Place of work:_____

Meeting place for interview:_____

Date/month/year:_____

Introduction and briefing

Study objective 4	Interview Guide
To identify the views of staff regarding the role of the helpline in areas of care provision that traditionally received a high number of calls from women at the study site	<ol style="list-style-type: none"> 1. What do you think is the main purpose of the maternity telephone helpline service? 2. What are your experiences of use of the helpline? 3. What are your expectations of the telephone helpline? 4. Have your expectations been met? Why 5. Has the telephone helpline influenced maternity workload in any way? 6. If yes please describe the influence (data, statistics, staff views) 7. If no, why do you think that there has been no influence? 8. What are your views of call volumes prior to and after the implementation of the helpline. 9. Can the helpline service be improved? If yes, how? 10. What are your views on what women use the helpline service for during their maternity experience? 11. Having had experience of a maternity telephone helpline would you recommend its implementation to other maternity units? 12. If yes why? 13. If no why not? 14. Conclusion and debriefing 15. Mention points learned from interview 16. The interview concludes with "I have no further questions. Do you have anything more you want to share or ask before we finish the interview"?

Appendix 9 Ethics Approval



National Research Ethics Service

The Joint UCL/UCLH Committees on the Ethics of Human Research (Committee A)

National Research Ethics Service
South House
Royal Free Hospital
Pond Street
London
NW3 2QG

Telephone: 020 7794 0500 extn 36906
Facsimile: 020 7794 1004

05 October 2009

Professor Debra Bick
Professor of Evidence Based Midwifery Practice
King's College London, Florence Nightingale School of Nursing and Midwifery
James Clerk Maxwell Building
57 Waterloo Road
London
SE1 8WA

Dear Professor Bick

Study Title: How does using a maternity telephone helpline impact on women who use the service and the maternity workload? a case study design

REC reference number: 09/H0714/50
Protocol number: 1

The Research Ethics Committee reviewed the above application at the meeting held on 24 September 2009. Thank you to Jo Fitzpatrick and Jacqueline Dunkley-Bent for attending to discuss the study.

Ethical opinion

Due to the nature of the telephone interview and how the participant's responses will be manually noted, the REC considered it highly unlikely there will be any verbatim quotations in the write up of your findings. However if there is any possibility that quotations may be used in a report or thesis, then a specific request to do so should be included in the Consent Form. As discussed at the meeting, you may wish to look into audio recording the telephone interviews; the REC would be content for you to do so but again the participant must be made aware of this in the Participant Information Sheet and Consent Form.

Please submit any revised versions of participant documentation to the REC Coordinator for information.

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

This Research Ethics Committee is an advisory committee to London Strategic Health Authority
The National Research Ethics Service (NRES) represents the NRES Directorate within
the National Patient Safety Agency and Research Ethics Committees in England

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>. Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Covering Letter	1	21 August 2009
REC application	2.3	18 August 2009
Protocol	1	20 August 2009
Investigator CV	Prof Debra Bick	20 August 2009
Participant Information Sheet: Appendix 5 - Information sheet for women	1	20 August 2009
Participant Consent Form: Appendix 6 - Participant consent form	1	20 August 2009
Participant Consent Form: Appendix 9 - Consent form for members of staff		
Letter of invitation to participant	Appendix 4 letter for women who use the service V1	20 August 2009
GP/Consultant Information Sheets	Appendix 8 - Information Sheet for Health Professional V1	20 August 2009
Evidence of insurance or indemnity	KCL Insurance Policy	20 August 2009
Referees or other scientific critique report	From KCL	19 August 2009
Questionnaire: Appendix 2 - Interview proforma first telephone interview	1	20 August 2009
Questionnaire: Appendix 10 - Interview guide	1	20 August 2009
Appendix 2 - Prompt sheet for the telephone	1	20 August 2009

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helpline midwife		
Appendix 7 - Research information letter to members of staff	1	20 August 2009
Work schedule	1	20 August 2009
KCL Guidelines on good practice in academic research	1	20 August 2009
KCL Data protection policy	1	20 August 2009
Investigator CV	Mrs Jacqueline Dunkley-Bent	20 August 2009
KCL Acceptable use policy (IT facilities)	1	20 August 2009
KCL Mobile device policy	1	20 August 2009
KCL Lock it up	1	20 August 2009
Using high-level security policies to transform unsafe programs into safe programs	1	20 August 2009
KCL Information security policy	1	20 August 2009
KCL Records disposition schedule	1	20 August 2009
KCL IT network services, systems and electronic communications monitoring policy	1	20 August 2009
KCL Encryption Guidance	1	20 August 2009

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email

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referencegroup@nres.npsa.nhs.uk

09/H0714/50

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely


Dr Geoff Scott
Chair

Email: katherine.ouseley@royalfree.nhs.uk

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted written comments*

"After ethical review – guidance for researchers"

Copy to: *Doctoral Student – Mrs Jacqueline Dunkley-Bent, Florence Nightingale School of Nursing and Midwifer, KCL*

Sponsor's contact – Keith Brennan, KCL

Co-sponsor's and R&D contact - Karen Ignatian, Guys & St Thomas' NHS Foundation Trust

The Joint UCL/UCLH Committees on the Ethics of Human Research (Committee A)

Attendance at Committee meeting on 24 September 2009

Committee Members:

Name	Profession	Present	Notes
Ms Sally Davis	Lay - Barrister	Yes	
Professor Clare Fowler	Professor of Uro-Neurology	No	
Miss Mina Karamshi	Research Sister (Nursing)	Yes	
Ms Marion Koebner	Retired Lawyer	Yes	
Ms Wendy Matthews	Legal Member (Lay)	Yes	
Dr Judith Meek	NNU Consultant	No	
Dr Raymond Noble	Sub-Dean Medical School	Yes	
Dr John Phelan	Research Scientist/ Molecular Biologist	Yes	
Dr Geoff Scott	Microbiologist	Yes	
Mr Jonathan Simons	Investment Banker	Yes	
Dr. Anne Marie Swart	Clinical Epidemiologist	No	
Dr Robert Urquhart	Head of Pharmacy	Yes	
Dr Sarah Wong	Associate GP	Yes	
Ms Vivien Yule	Director, Ruston Poole International	Yes	

Also in attendance:

Name	Position (or reason for attending)
Miss Katherine Ouseley	REC Coordinator

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RESEARCH IN HUMAN SUBJECTS OTHER THAN CLINICAL TRIALS OF INVESTIGATIONAL MEDICINAL PRODUCTS

After ethical review – guidance for sponsors and investigators

This document sets out important guidance for sponsors and investigators on the conduct and management of research with a favourable opinion from a NHS Research Ethics Committee. Please read the guidance carefully. A failure to follow the guidance could lead to the committee reviewing its opinion on the research.

1. Further communications with the Research Ethics Committee
 - 1.1 Further communications during the research with the Research Ethics Committee that gave the favourable ethical opinion (hereafter referred to in this document as "the Committee") are the personal responsibility of the Chief Investigator.
2. Commencement of the research
 - 2.1 It is assumed that the research will commence within 12 months of the date of the favourable ethical opinion.
 - 2.2 The research must not commence at any site until the local Principal Investigator (PI) or research collaborator has obtained management permission or approval from the organisation with responsibility for the research participants at the site.
 - 2.3 Should the research not commence within 12 months, the Chief Investigator should give a written explanation for the delay
 - 2.4 Should the research not commence within 24 months, the Committee may review its opinion.
3. Duration of ethical approval
 - 3.1 The favourable opinion for the research generally applies for the duration of the research. If it is proposed to extend the duration of the study as specified in the application form, the Committee should be notified.

- 3.2 Where the research involves the use of "relevant material" for the purposes of the Human Tissue Act 2004, authority to hold the material under the terms of the ethical approval applies until the end of the period declared in the application and approved by the Committee.

4. Progress reports

- 4.1 Research Ethics Committees are expected to keep a favourable opinion under review in the light of progress reports and any developments in the study. The Chief Investigator should submit a progress report to the Committee 12 months after the date on which the favourable opinion was given. Annual progress reports should be submitted thereafter.
- 4.2 Progress reports should be in the format prescribed by NRES and published on the website (see www.nres.npsa.nhs.uk/applicants/after-ethical-review/).
- 4.3 The Chief Investigator may be requested to attend a meeting of the Committee or Sub-Committee to discuss the progress of the research.

5. Amendments

- 5.1 If it is proposed to make a substantial amendment to the research, the Chief Investigator should submit a notice of amendment to the Committee.
- 5.2 A substantial amendment is any amendment to the terms of the application for ethical review, or to the protocol or other supporting documentation approved by the Committee, that is likely to affect to a significant degree:
- (a) the safety or physical or mental integrity of the trial participants
 - (b) the scientific value of the trial
 - (c) the conduct or management of the trial.
- 5.3 Notices of amendment should be in the format prescribed by NRES and published on the website, and should be personally signed by the Chief Investigator. The agreement of the sponsor should be sought before submitting the notice of amendment.
- 5.4 A substantial amendment should not be implemented until a favourable ethical opinion has been given by the Committee, unless the changes to the research are urgent safety measures (see section 7). The Committee is required to give an opinion within 35 days of the date of receiving a valid notice of amendment.
- 5.5 Amendments that are not substantial amendments ("minor amendments") may be made at any time and do not need to be notified to the Committee.

6. Changes to sites

Management permission (all studies)

- 6.1 For all studies, management permission should be obtained from the host organisation where it is proposed to:

- include a new site in the research, not included in the list of proposed research sites in the original REC application
- appoint a new PI or Local Collaborator at a research site
- make any other significant change to the conduct or management of a research site.

In the case of any new NHS site, the Site-Specific Information (SSI) Form should be submitted to the R&D office for review as part of the R&D application.

Site-specific assessment (where required)

- 6.2 The following guidance applies only to studies requiring site-specific assessment (SSA) as part of ethical review.
- 6.3 In the case of *NHS/HSC sites*, SSA responsibilities are undertaken on behalf of the REC by the relevant R&D office as part of the research governance review. The Committee's favourable opinion for the study will apply to any new sites and other changes at sites provided that management permission is obtained. There is no need to notify the Committee (or any other REC) about new sites or other changes, or to provide a copy of the SSI Form.
- 6.4 Changes at *non-NHS sites* require review by the local REC responsible for site-specific assessment (SSA REC). Please submit the SSI Form (or revised SSI Form as appropriate) to the SSA REC together with relevant supporting documentation. The SSA REC will advise the main REC whether it has any objection to the new site/PI or other change. The main REC will notify the Chief Investigator and sponsor of its opinion within a maximum of 35 days from the date on which a valid SSA application has been received by the SSA REC.

Studies not requiring SSA

- 6.5 For studies designated by the Committee as not requiring SSA, there is no requirement to notify the Committee of the inclusion of new sites or other changes at sites, either for NHS or non-NHS sites. However, management permission should still be obtained from the responsible host organisation (see 6.1 above).

7. Urgent safety measures

- 7.1 The sponsor or the Chief Investigator, or the local Principal Investigator at a trial site, may take appropriate urgent safety measures in order to protect research participants against any immediate hazard to their health or safety.
- 7.2 The Committee must be notified within three days that such measures have been taken, the reasons why and the plan for further action.

8. Serious Adverse Events

- 11.2 The Chief Investigator may at any time request that the Committee reviews its opinion, or seek advice from the Committee on any ethical issue relating to the research.

-
- 8.1 A Serious Adverse Event (SAE) is an untoward occurrence that:
- (a) results in death
 - (b) is life-threatening
 - (c) requires hospitalisation or prolongation of existing hospitalisation
 - (d) results in persistent or significant disability or incapacity
 - (e) consists of a congenital anomaly or birth defect
 - (f) is otherwise considered medically significant by the investigator.
- 8.2 A SAE occurring to a research participant should be reported to the Committee where in the opinion of the Chief Investigator the event was related to administration of any of the research procedures, and was an unexpected occurrence.
- 8.3 Reports of SAEs should be provided to the Committee within 15 days of the Chief Investigator becoming aware of the event, in the format prescribed by NRES and published on the website.
- 8.4 The Chief Investigator may be requested to attend a meeting of the Committee or Sub-Committee to discuss any concerns about the health or safety of research subjects.
- 8.5 Reports should not be sent to other RECs in the case of multi-site studies.
9. Conclusion or early termination of the research
- 9.1 The Chief Investigator should notify the Committee in writing that the research has ended within 90 days of its conclusion. The conclusion of the research is defined as the final date or event specified in the protocol, not the completion of data analysis or publication of the results.
- 9.2 If the research is terminated early, the Chief Investigator should notify the Committee within 15 days of the date of termination. An explanation of the reasons for early termination should be given.
- 9.3 Reports of conclusion or early termination should be submitted in the form prescribed by NRES and published on the website.
10. Final report
- 10.1 A summary of the final report on the research should be provided to the Committee within 12 months of the conclusion of the study. This should include information on whether the study achieved its objectives, the main findings, and arrangements for publication or dissemination of the research including any feedback to participants.
11. Review of ethical opinion
- 11.1 The Committee may review its opinion at any time in the light of any relevant information it receives.

Appendix 10 Local Site Approval

Our ref: HRP84

Dear Jacqueline Dunkley-Bent


Honorary research contract issued by XXXXXX

I am pleased to offer you and honorary research contract XXX

Honorary research contract between XX

Passport 84

NHS

AND	
Name:	Jacqueline Yvonne Dunkley-Bent
Employer:	
OR Place of Study:	KCL
Report To:	
(Principal Investigator/Head of Department)	Debra Bick
PERIOD of AGREEMENT	
• Three Years	
From:	16 th December 2009
To:	1 st April 2010
OR	
Fixed term	
contract for:	3 years months Effective Date:
SIGNATURES	
Researcher:	
Date:	17-12-09
Name:	Jacqueline Yvonne
On behalf of the NHS organisation(s)	
Date:	17-12-09

Whereas

- A. The Researcher named in this Agreement ("the Researcher") is employed by the employing organisation named in this Agreement ("the Employer") to undertake research, during the course of which the Researcher requires access to the Trust(s) named in this Agreement ("the Trust(s)"), their premises, patients, their clinical samples, and clinical and personal information ("the Facilities"). Where independent contractors and their premises are involved with research activity, the Agreement is issued by the host PCT on behalf of the independent contractors.

OR

The Researcher named in this Agreement ("the Researcher") is studying at the place of study named in this Agreement ("the Place of Study") to undertake research, during the course of which the Researcher requires access to the Trust(s) named in this Agreement ("the Trust(s)"), their premises, patients, their clinical samples, and clinical and personal information ("the Facilities"). Where independent contractors and their premises are involved with research activity, the Agreement is issued by the host PCT on their behalf of the independent contractors.

- B. The Trust(s) provide healthcare services to NHS patients, including patients who are protected by the criminal record disclosure arrangements.
- C. The Trust(s) and Researcher have entered into this agreement whereby the Researcher can have access to the Facilities of the Trust(s) to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation, subject to the conditions below.

1. Status

The title and status of this Honorary Research Contract does not create an employment relationship and attracts no remuneration from the Trust(s). Its award will be subject to: a satisfactory criminal record disclosure if the research includes the categories of patients who are included in the criminal record disclosure arrangements; confirmation of registration with the GMC or other appropriate professional body if the Researcher is required to maintain such professional registration; and confirmation that the Researcher's health does not constitute a risk to patients of the Trust(s), employees of the Trust(s) or visitors to the Trust(s).

2. Reporting Arrangements

The Researcher shall report to the Principal Investigator/Head of Department named in this Agreement whilst conducting research under this Agreement.

3. Policies and Procedures

- 3.1. The terms and conditions of employment of the Researcher including applicable policies and procedures are determined by the Employer and the Researcher will be carrying out duties at the Trust(s) in accordance with the contract of employment with the Employer

OR

The rules governing the Researcher's period of study including applicable policies and procedures are determined by the Place of Study and the Researcher will be carrying out duties at the Trust(s) in accordance with those rules.

- 3.2. In carrying out research under the terms of this Agreement, the Researcher agrees to act at all times in accordance with the policies and procedures of

- the Trust(s) including the Research Governance Framework, copies of which are available upon request.
- 3.3. The Researcher is required to co-operate with the Trust(s) in discharging relevant duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of himself/herself and others while on the premises of the Trust(s). The Researcher must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and the premises as is expected of any other contract holder and must act appropriately, responsibly and professionally at all times.
 - 3.4. The Researcher agrees to accept any variation to this Agreement necessitated by changes to research and development guidance issued by the Department of Health.
 - 3.5. In the event of sickness or unavoidable absence, the Researcher must notify her/his line manager and/or the Trust(s) immediately. The Researcher must report any accident or injury, arising out of or in the course of her/his activities at the Trust(s) and make appropriate records and statements as required.
 - 3.6. Adverse events or incidents arising from the research should be reported immediately in compliance with the policies of the Trust(s).

4. Confidentiality

Information concerning the Facilities is confidential and must not be disclosed under any circumstances. The Researcher must treat all material connected with her/his presence in the Trust(s) in accordance with the NHS Confidentiality Code of Practice and the Data Protection Act 1998 (which covers information concerning individuals stored in any systems belonging to the Trust(s)). Unauthorised disclosure could lead to prosecution under the terms of the Act.

5. Legal Claims

- 5.1. The Trust(s) agrees/agree to indemnify the Researcher for any claims in negligence in respect of those patients of the Trust(s) to whom the Researcher provides care and treatment when performing duties in accordance with this Agreement.
- 5.2. The Trust(s) takes/take no responsibility for any claims against the Researcher arising from her/his negligent acts or omissions in undertaking agreed programmes of research using the Facilities of the Trust(s) where these are covered by warranties or conditions of any third party contracts signed by the Employer/Place of Study.
- 5.3. The Researcher is therefore advised either to ensure that the Employer/Place of Study maintains adequate indemnity arrangements or, if not, maintains membership of her/his medical defence organisation or has other professional indemnity arrangements in place before starting to use the Facilities of the Trust(s).
- 5.4. The Trust(s) accepts/accept no responsibility for damage to or loss of the Researcher's personal property.
- 5.5. The Trust(s) accepts/accept no legal liability in respect of any decision it/they may take to terminate this contract pursuant to section 9 below.

6. Complaints and misconduct

- 6.1. The Researcher should raise any complaints against the Trust(s) with the Employer/Place of Study.
- 6.2. Complaints or allegations against the Researcher will be dealt with in accordance with the policies and procedures of the Employer/Place of Study. Partnership between the Trust(s) and the Employer/Place of Study will be assured.

- 6.3. The Researcher agrees to comply with any requests for data, information or documents from the Trust(s) or the Employer/Place of Study as part of any investigation of a complaint or of suspected misconduct.

7. Intellectual Property

The Trust(s) is/are required by the Department of Health to protect and manage intellectual property arising from Research and Development funded by the NHS. The Trust(s) has/have arrangements in place with the Employer/Place of Study relating to ownership and exploitation of intellectual property. All intellectual property outputs from the Researcher's research activity in the Trust(s), both commercially and non-commercially exploitable, should be declared to the Research and Development office of this NHS organisation for our records, e.g. peer-reviewed papers or patents.

8. Audit

The Researcher agrees that all research undertaken by him/her may be subject to audit and/or monitoring. The Trust(s) will ensure that all data, records and other materials are kept confidential. The Researcher also agrees that the information about her/his research activity may be listed by the Trust(s) on relevant national databases and incorporated into the Annual Research Report of the Trust(s). This Agreement will be subject to random checks as part of the research and development audit activity of the Trust(s).

9. Duration and Termination

- 9.1. The Trust(s), the Researcher or the Employer/Place of Study may request that this Agreement is reviewed in order to confirm the Researcher's status as a Researcher.
- 9.2. Subject to 9.3 below, the Trust(s) reserves/reserve the right to terminate this Agreement upon giving one month's written notice.
- 9.3. In the event that the Researcher fails to comply with the requirements of this Agreement, the Trust(s) reserves/reserve the right to:
 - 9.3.1. terminate the Agreement forthwith without notice and refuse the Researcher access to the Facilities of the Trust(s); or
 - 9.3.2. require the Researcher to submit to an agreed training programme as a condition of being allowed to continue to have access to the Facilities of the Trust(s); or
 - 9.3.3. require that this Agreement is suspended subject to investigation by the Employer/Place of Study in conjunction with the Trust(s). The Employer/Place of Study and the Trust(s) will endeavour to complete the investigation within 20 working days and the Researcher will be notified regarding termination or reinstatement of the contract.
- 9.4. The Trust(s) agrees/agree that no later than five working days prior to terminating the Agreement in accordance with 9.2 or 9.3 above, it will inform the Employer/Place of Study of its intention to do so.
- 9.5. The Trust(s) reserves/reserve the right to exclude the Researcher at any time from its premises for whatever reason, pending a decision upon whether it wishes to terminate this Agreement.
- 9.6. It is the obligation of the Researcher to disclose any mitigating circumstances that may affect the Agreement such as a change in criminal record, registration, employment or occupational health status.

10. The Researcher warrants that she/he has the relevant skills and expertise to undertake the research for which she/he is permitted to use the Facilities of the Trust(s) and is supported through suitable professional development programmes or training by the Employer/Place of Study or research sponsor, to ensure that she/he is suitable to undertake research.

Appendix 11 Glossary of Terms

Agenda for Change

The NHS system of pay that is linked to the job content, and the skills and knowledge staff apply to perform jobs.

Antenatal care

Professional care provided to a woman and her partner to support them and their baby through the pathway of pregnancy and to help achieve the best possible health, psychological and social outcomes for the mother, baby and family.

Antepartum

The period before childbirth.

Birth centre

A facility (free standing or within a maternity hospital) managed and run by midwives which provides a comfortable home-like environment for women and partners who anticipate a straightforward birth. As with home births, all midwifery services must be provided within the safety net of a functioning local network providing prompt emergency transfer when required.

Birthrate Plus

This is a framework for workforce planning and strategic decision making in maternity services. To determine the case mix for this model, clinical scores are allocated retrospectively to mothers and babies depending on the normality of the process and outcome of the labour.

Continuing Professional Development

Is the means by which members of professional associations maintain, improve and broaden their knowledge and skills and develop the personal qualities required in their professional lives.

Intrapartum

Pertaining to the period of labour and birth.

Maternity Support Worker

Someone who works as part of a team and assists the practising midwife in carrying out maternity care, both in community and hospital settings. The role varies locally and may include duties (under

the direction and supervision of a midwife) for which midwifery training and registration are not required. This role is also referred to as Health Care assistant.

Midwife Led care

Care where the midwife is the lead professional.

Midwifery units/birth centres

A facility (free standing or within a maternity hospital) managed and run by midwives which provides a comfortable home-like environment for women and partners who anticipate a straightforward birth.

Multigravida

A woman who has been pregnant more than once.

Multiparity

A woman who has had more than one child.

Named midwife

A named, registered midwife who is responsible for providing all, or most of a woman's antenatal and/or postnatal care and co-ordinating care should they not be available.

Nursing and Midwifery Council

Organisation set up by Parliament to protect the public by ensuring that nurses and midwives provide and maintain high standards of care to their patients and clients and establish standards of education, training, conduct and performance.

Parity: Total number of previous live births and still births.

Postnatal care

Professional care provided to meet the needs of women and their babies up to 6-8 weeks after birth, in the context of their families

Postnatal

Postnatal is the period beginning immediately after the birth and extending for about six weeks.

Primigravida

A woman who is pregnant for the first time.

Royal College of Midwives

UK trade union and professional organisation for midwives.

RCOG

Royal College of Obstetricians and Gynaecologists

Shared Care

Shared care is an approach to care which uses the skills and knowledge of a range of health professionals who share joint responsibility in relation to an individual's care

Still birth

If a fetus dies in the uterus before delivery, after the 24th week, it is called a stillbirth. The loss of a pregnancy before 24 weeks of gestation is called a miscarriage.

Triage

Triage is the process of assessment to determine the mother's care needs to make appropriate referrals.

Trust

An NHS body that provides secondary care or hospital based healthcare services from one or more hospitals.